

Class XII Half Yearly Subjective

History

Sample Paper- Part - 1

1. How did the architectural features of Mohenjo Daro indicate planning? support your answer with suitable examples.
2. Describe the salient features of mahajanapadas?
3. Explain how you will prove that the text of Mahabharata was a dynamic one
4. Explain the main features of the Maurya administration
5. Explain the language and content of Mahabharata
6. Why did Sanchi Stupa survived while Amravati did not?
7. Why are Buddhism and Jainism considered as a religious Reform movement?
8. What does Bhakti moment mean?
9. Identify the relationship between and the Sufis & the state from the eighth to the eighteenth century.
10. Who divided the subsidiary Alliance? Explain the terms and conditions of the subsidiary Alliance.
11. Discuss the impact of Lord Dalhousie's policy of annexation of Awadh on the people of this region.
12. Examine why did Gandhiji start the Salt Satyagraha. Why was Salt Satyagraha notable event?
13. Explain how the constitution of India protects the rights of the central government and the states.

Objective Question Paper -Part II

“I Believe Separate Electorates will be Suicidal to the Minorities”

During the debate on 27th August, 1947, Govind Ballabh Pant said. I believe separate electorates will be suicidal to the minorities and will do them tremendous harm. If they are isolated forever, they can never convert themselves into a majority and the feeling of frustrations will cripple them even from the very beginning. What is that you desire and what is our ultimate objective? Do the minorities always want to remain as minorities or do they ever expect to form an integral part of a great nation and as such to guide and control its destinies?

If they do can they ever achieve that aspiration and that ideal if they are isolated from the rest of the community? I think it would be extremely dangerous for them if they were segregated from the rest of the community and kept aloof in an air-tight compartment where they would have to rely on others even for the air they breathe. The minorities if they are returned by separate electorates can never have any effective voice.

- 1. Why were some Muslims, like Begum Aizaz Rasul against it?**
- 2. What are separate electorates?**
- 3. Why did GB Pant feel separate electorate would be suicidal for the minorities? (Delhi 2008)**
- 4. Do you think that seats should be reserved for Muslims and other minorities in educational institutions? Give one argument for or against it.**

Passage- 2

Ambedkar on separate electorates

In response to Mahatma Gandhi's opposition to the demand for separate electorates for the Depressed Classes, Ambedkar wrote.

Here is a Class which is undoubtedly not in a position to sustain itself in the struggle for existence. The religion, to which they are tied, instead of providing them an honourable place, brands them as lepers, not fit for ordinary intercourse. Economically, it is a class entirely dependent upon the high-caste Hindus for earning its daily bread with no independent way of living open to it.

Nor are all ways closed by reason of the social prejudices of the Hindus but there is a definite attempt all through our Hindu Society to bolt every possible door so as not to allow the Depressed Classes any opportunity to rise in the scale of life.

In these circumstances, it would be granted by all fairminded persons that as the only path for a community so handicapped to succeed in the struggle for life against organised tyranny, some share of political power in order that it may protect itself is a paramount necessity.

- 1. Examine the arguments given in favour of separate electorate for depressed classes, by Dr Ambedkar and give your reactions.**
- 2. Describe the position of economically depressed class.**
- 3. Suggest some other ways to provide an honourable position to depressed classes.**

Half Yearly Sample paper XII 2020-21

Computer Science with Python (Objective)

Time : 1.5 hrs.

M. Marks : 50

General Instructions

Instructions:

All the questions are compulsory.

Read the questions carefully before attempting.

Q.no. 1 to 20 are very short answer questions (objective type) carry 1 mark each.

Q.no. 21 to 35 are short answer questions (objective type) and carry 2 marks each.

1. Multiple Choice Questions:

1.) Which keyword is used for function?

- a) Fun
- b) Define
- c) Def
- d) Function

2.) How can we swap two numbers $a = 10$, $b = 20$ in python without using third variable?

- 1. A - $a = b$
 $b = a$
- 2. B - $a, b = b, a$
- 3. C - both a & b
- 4. D - $b = a$
 $a = b$

3.) Is Python case sensitive when dealing with identifiers?

- a) yes
- b) no
- c) machine dependent
- d) none of the mentioned

4.) All keywords in Python are in _____

- a) lower case
- b) UPPER CASE
- c) Capitalized
- d) None of the mentioned

5.) What is the result of `cmp(5, 1)`?

- a) 1
- b) 0
- c) True
- d) False

6.) The data structure required for Breadth First Traversal on a graph is?

- a) Stack
- b) Array
- c) Queue
- d) Tree

7.) What will be the output of the following Python code?

```
>>>t = (1, 2, 4, 3, 8, 9)
>>>[t[i] for i in range(0, len(t), 2)]
```

- a) [2, 3, 9]
- b) [1, 2, 4, 3, 8, 9]
- c) [1, 4, 8]
- d) (1, 4, 8)

8.) A queue follows _____

- a) FIFO (First In First Out) principle
- b) LIFO (Last In First Out) principle
- c) Ordered array

d) Linear tree

9.) List slice is a list in itself.

- a) True
- b) False

10.) Which of the following is not a complex number?

- a) $k = 2 + 3j$
- b) $k = \text{complex}(2, 3)$
- c) $k = 2 + 3i$
- d) $k = 2 + 3J$

11.) What will be the output of the following Python statement?

```
>>>x=50
Def func (x):
    X=2
Func(x)
Print('x is now', x)
```

- a) x is now 50
- b) x is now 2
- c) x is now 100
- d) Error

12.) Which of the following is not the type of queue?

- a) Ordinary queue
- b) Single ended queue
- c) Circular queue
- d) Priority queue

13.) Which of the following commands will create a list?

- a) `list1 = list()`
- b) `list1 = []`
- c) `list1 = list([1, 2, 3])`
- d) all of the mentioned

14.) Name the statement that sends back a value from a function?

- a) Print
- b) Input
- c) Return
- d) None

15.) What will be the output of the following Python code?

```
def f1():  
    x=15  
    print(x)
```

```
x=12
```

```
f1()
```

- a) Error
- b) 12
- c) 15
- d) 1215

16.) What will be the output of the following Python code snippet?

```
d = {"john":40, "peter":45}
```

```
print(list(d.keys()))
```

- a) ["john", "peter"]
- b) [{"john":40, "peter":45}]
- c) ("john", "peter")
- d) ("john":40, "peter":45)

17.) To read the next line of the file from a file object fobj, we use:

- a) fobj.read(2)
- b) fobj.read()
- c) fobj.readline()
- d) fobj.readlines()

18.) Which of the following is not a declaration of the dictionary?

- a) {1: 'A', 2: 'B'}
- b) dict([[1, "A"], [2, "B"]])
- c) {1, "A", 2, "B"}

- d) { }
- 19.) Computer Network is
- A. Collection of hardware components and computers
 - B. Interconnected by communication channels
 - C. Sharing of resources and information
 - D. All of the Above
- 20.) what is a Firewall in Computer Network?
- A. The physical boundary of Network
 - B. An operating System of Computer Network
 - C. A system designed to prevent unauthorized access
 - D. A web browsing Software
- 21.) Which of the following protocol is/are defined in Transport layer?
- A. FTP
 - B. TCP
 - C. UDP
 - D. B & C
- 22.) Stack can be implemented using _____ and _____ ?
- A. Array and Binary Tree
 - B. Linked List and Graph
 - C. Array and Linked List
 - D. Queue and Linked List
- 23.) When function calls another function then the details of previous function are stored in Stack ?
- a. True
 - b. False
- 24.) To open a file c:\scores.txt for writing, we use _____
- a) outfile = open("c:\scores.txt", "w")
 - b) outfile = open("c:\\scores.txt", "w")
 - c) outfile = open(file = "c:\scores.txt", "w")
 - d) outfile = open(file = "c:\\scores.txt", "w")
- 25.) Which of the following statements are true?
- a) When you open a file for reading, if the file does not exist, an error occurs
 - b) When you open a file for writing, if the file does not exist, a new file is created

- c) When you open a file for writing, if the file exists, the existing file is overwritten with the new file
- d) All of the mentioned

26.) What will be the output of the following Python code?

```
re.escape('new**world')
```

- a) 'new world'
- b) 'new**world'
- c) '**'
- d) 'new', '*', '*', 'world'

27.) What will be the output of the following Python code?

```
l=list('HELLO')  
'first={0[0]}, third={0[2]}'.format(l)
```

- a) 'first=H, third=L'
- b) 'first=0, third=2'
- c) Error
- d) 'first=0, third=L'

28.) Is the following Python code valid?

```
>>> a,b,c=1,2,3
```

```
>>> a,b,c
```

- a) Yes, [1,2,3] is printed
- b) No, invalid syntax
- c) Yes, (1,2,3) is printed
- d) 1 is printed

29.) What is the use of Bridge in Network?

- A. to connect LANs
- B. to separate LANs
- C. to control Network Speed
- D. All of the above

30.) What is the meaning of Bandwidth in Network?

- A. Transmission capacity of a communication channels
- B. Connected Computers in the Network
- C. Class of IP used in Network
- D. None of Above

31.) Which of the following functions is a built-in function in python?

- a) seed()
- b) sqrt()
- c) factorial()
- d) print()

32.) What will be the output of the following Python expression?

```
round(4.576)
```

- a) 4.5
- b) 5
- c) 4
- d) 4.6

33.) What will be the output of the following Python code?

```
def f(i, values = []):  
    values.append(i)  
    return values
```

```
f(1)
```

```
f(2)
```

```
v = f(3)
```

```
print(v)
```

a) [1] [2] [3]

b) [1] [1, 2] [1, 2, 3]

c) [1, 2, 3]

d) 1 2 3

34.) What will be the output of the following Python code?

```
x = 'abcd'
```

```
for i in x:
```

```
    print(i)
```

```
    x.upper()
```

a) a B C D

b) a b c d

c) A B C D

d) error

35.) What will be the output of the following Python code?

```
x = 'abcd'  
for i in range(x):  
    print(i)
```

- a) a b c d
- b) 0 1 2 3
- c) error
- d) none of the mentioned

Half Yearly Sample paper XII 2020-21
Computer Science with Python (Subjective)

Time : 1.5 hrs.

M. Marks : 50

General Instructions

Instructions:

- a. All the questions are compulsory.
- b. Read the questions carefully before attempting.
- c. There are 16 questions in the question paper. All questions are compulsory.
- d. Very Short answer type questions, carrying 2 marks each. Answer to these questions should not exceed 20 to 30 words.
- e. Short answer type questions, carrying 3 marks each. Answer to these questions should not exceed 50 to 60 words.
- f. Long answer type questions, carrying 5 marks each. Answer to these questions should not exceed 80 to 90 words.

Subjective Type paper

Very Short Answer types questions:

1. What are the different file-processing modes supported by python?
2. How can you create Unicode string in python?
3. Why is Python interpreted?
4. .Define Switch in networks.

5. When is a global statement used?
6. Explain appending to a file.

Short answer type questions:

1. What is the significance of having functions in a program.
2. What is Python module, package and library? Explain briefly.
3. Differentiate between read() and write() using examples.
4. Write a code to print the last line of a text file 'data.txt'.
5. Enlist some applications of queues.
6. Define the terms:
 - A, Protocol
 - B. Repeater

Long answer type questions

- 1.)What is a communication channel? Explain types of communication channel for a network.
- 2.)Differentiate between server-based network and peer-to-peer network.
- 3.)Write a function in python to show Push and pop methods in a stack.
- 4.)Explain the factors on which quality of an algorithm judged.

HALF YEARLY EXAMINATION
CLASS XII
SUBJECT – POLITICAL SCIENCE (OBJECTIVE)(SAMPLE PAPER)

TIME: 1hr30 min

MM – 30

Q1. In April 1961, the leaders of Union of Soviet Socialist Republic (USSR) were worried that _____ would invade communist ruled Cuba and overthrow Fidel Castro.

Q2. _____ alliance was formed by USA in Europe.

Q3. _____ initiated the reforms in the USSR in 1985.

Q4. The highest functionary of the UN is _____.

Q5. Name the country which adopted an 'Open door policy'.

Q6. Complete the sentence in a meaningful way-

Name the currency of Europe.

Q7. Correct and rewrite-

`Model of transition in Russia, East Europe and Central Asia which was influenced by IMF and World Bank is called Cold War.

Q8. SAARC stands for _____.

Q9. Select the correct option

Bipolarity ended in

- i) 1991
- ii) 1992
- iii) 1993
- iv) 1994

Q10. _____ is the currency of EU.`

Q11. UN was established as the successor of _____.

Q12. World is dominated by a single power as USA in the present era is known as _____.

Q13. The BRICS was founded in _____ in _____.

Q14. The fall of the _____ symbolized the end of the cold war.

Q15. _____ is the organization of UN that deals with security.

Q16. Name the political party with whom would the given person associated with

A.k Gopalan

Q17. Identify the state from which Nizam forces belong to _____ .

Q18. Write the full form of NITI in NITI Aayog.

Q19. Name the para military forces of Nizam of Hyderabad.

Q20. The first Nuclear explosion undertaken by India in _____ .

Q21. Select the correct option-

Panchsheel stands for

- i) India's foreign policy
- ii) Five principles of peaceful coexistence
- iii) Razakars
- iv) NAM

Q22. Who was the first Chief Election Commissioner of Independent India?

Q23. Name the leader who advocated separated state of Andhra Pradesh?

Q24. Who propagated 'Two Nation Theory'?

Q25. What do you understand by Coalition?

Q26. Congress was able to dominate from 1947-67 due to its _____.

Q27. India opposes unjust nuclear treaties like _____ and _____.

Q28. _____ was an ally of the Soviet Union.

Q29. Rulers of the most of the princely states signed a document called the _____.

Q30. _____ Championed the ideas of 'Party of Socialism'.

HALF YEARLY

SUBJECT- SOCIAL SCIENCE(SUBJECTIVE)(SAMPLE PAPER)

CLASS – XII

Time: 1hr30 min

MM.50

Q1. Suggest any two ways to improve the functioning of the Security Council. 2

Q2. What was India's attitude towards Israel after 45 years of independence? 2

Q3. What was the logic of deterrence? What was its relevance? 2

Q4. Describe the nature of Party system in India between 1947-67. 2

Q5. Who was Jayaprakash Narain? Mention one achievement of his? 2

Q6. Explain Arab Spring? 4

Q7. What are its main objectives and functions of NITI Aayog? How it is different from Planning Commission? 4

Q8. Describe the features of coalition nature of Congress. 4

Q9. India's relations with Russia are important aspects of Indian foreign policy.
How was it of great benefit to India? 4

Q.10 Study the given passage carefully and answer the following questions 5

The cold war was not simply a matter of power rivalries, military alliances and of balance of power. These were accompanied by a real ideological conflict as well, a difference over the best and most appropriate way of organizing political, economic, and social life all over the world.

- i. Why is a war like situation called a cold war?
- ii. Identify one military pact each signed by each of the two super powers to balance the power rivalries.
- iii. Differentiate between the ideologies represented by the rival blocs.

Q11. Study the given passage carefully and answer the following questions 5

“Patel, the organizational man of the congress, wanted to purge the Congress of other political groups and sought to make of it a cohesive and disciplined political party. He ---- sought to take the Congress away from its all embracing character and turn it into a close knit party of disciplined cadres. Being a ‘realist’ he looked more for discipline than for comprehension. While too romantic a view of “carrying on the movement,” Patel’s idea of transforming the Congress into strictly political party with a single ideology and tight discipline showed an equal lack of understanding of the eclectic role that the Congress, as a government, was to be called upon to perform in the decades to follow.”

- a) Why does the author think that Congress should not have been a cohesive and disciplined party?
- b) Give some examples of the eclectic role of the Congress party in the early years.

Q12. Study the given passage carefully and answer the following questions 5

The interim government took a firm stance against the possible division of India into smaller principalities of different sizes. The Muslim League opposed the Indian National Congress and took the view that the states should be free to adopt any course they liked. Sardar Patel, India’s deputy prime minister and the Home Minister during the crucial period, immediately after the Independence, played a historic role in negotiating with the rulers of the Princely States in bringing them into the Indian Union.

- i. Which government has been referred to as the interim government?
- ii. Why did the Muslim League oppose the Indian National Congress?
- iii. What makes the role of Sardar Patel a historic one? Explain.

Q13. Study the given passage carefully and answer the following questions (1+2+2=5)

The process of nation-building did not come to an end with the partition and integration of princely states. Now the challenge was to draw the internal boundaries of the Indian states. The boundaries had to be drawn in a way so that the linguistic and cultural plurality of the country could be reflected without affecting the unity of the nation.

- a) Which commission was appointed to look into the question of redrawing of boundaries of the states on the lingual basis?
- b) Why did the lingual issues become the basis of the formation of Andhra Pradesh?
- c) How is democracy associated with plurality?

Q14. Discuss the government's approach to the integration of Hyderabad and Manipur.
6

OR

Discuss Nehru's approach to nation building? Do you think his reasons were prudential or sentimental?

Q15. Describe democratic upsurge in Indian Politics.

6

OR

Explain BRICS as new centre of power.

Q16. Discuss the structure of the UN.

6

OR

What is the rationale of the non-aligned movement after the end of the Cold War?

Q17. Discuss India's changing relations with the US.

6

OR

The emerging economies of China and India have great potential to challenge the unipolar world. Do you agree with the statement? Substantiate your arguments.

HALF YEARLY EXAMINATION

CLASS-XII

SUBJECT-ACCOUNTANCY

SAMPLE PAPER

OBJECTIVE TYPE QUESTIONS

TIME: 1:30Hrs.

MM: 40

GENERAL INSTRUCTIONS:

- Marks are indicated against each question.
- Answer all questions.

Q.1 A and B decided to allow a commission of 2% on total sales to C as he devoted the maximum time in the business of partnership firm. Give the journal entry. (1)

Q.2 Interest payable on debentures is:

- (a) an appropriation of profits of the company
- (b) a charge against profits of the company
- (c) transferred to sinking fund investment account
- (d) transferred to general reserve (1)

Q.3 The opening balance of Prize Fund was Rs. 32,800. During the year, donations received towards this fund amounted to Rs. 15,400; amount spent on prizes was Rs. 12,300 and interest received on prize fund investment was Rs. 4,000. What is the closing balance of Prize Fund? (1)

Q.4 X and Y are partners sharing profits in the ratio of 4 : 3. Z is admitted for $\frac{1}{5}$ th share and he brings in Rs. 1,40,000 as his share of goodwill in cash of which Rs. 1,20,000 is credited to X and remaining amount to Y. New profit sharing ratio will be:

- (a) 4 : 3 : 5
- (b) 2 : 2 : 1
- (c) 1 : 2 : 2
- (d) 2 : 1 : 2 (1)

Q.5 How are Calls-in Arrears and Calls-in-advance disclosed in the balance sheet of a company? (1)

Q.6 If there is a 'March Fund', then match expenses and incomes are transferred to :

- (a) Income and Expenditure A/c
- (b) Assets side of Balance Sheet
- (c) Liabilities side of Balance Sheet
- (d) Both Income and Expenditure A/c and to Balance Sheet (1)

Q.7 J & K are partners in a firm sharing profits in the ratio of 2:3. L joins the firm. J surrenders $\frac{1}{5}$ th of his share and K $\frac{1}{3}$ rd of his share in favour of L. Find the new profit sharing ratio. (1)

Q.8 Distinguish between 'Dissolution of Partnership' and 'Dissolution of Partnership Firm' on the basis of Court's intervention. (1)

Q.9 On dissolution of a firm, partners' capital accounts balance was Rs. 63,000; creditors balance was Rs. 12,000 and profit & loss account debit balance was Rs. 6,000. Profit on realisation of assets was Rs. 7,800. Total amount realized from assets was:

- (a) Rs. 81,000
- (b) Rs. 76,800
- (c) Rs. 70,800
- (d) None (1)

Q.10 Suraj and Dilip are partners in a firm dealing in stationery items. The firm is well managed and enjoys the advantage of being cost effective. It buys stationery items at reasonable cost from Dilip's relative who is a manufacturer of stationery items. The firm's sale outlet is situated near a school. As a result, the firm has a steady demand of stationery items and is earning good profits. The firm is donating 10% of its profits to the nearby school for the education of the students of below poverty line. State one factor affecting the value of goodwill of the firm. (1)

Q.11 Maximum limit of Premium on shares is:

- (a) 5%
- (b) 10%
- (c) No Limit
- (d) 100% (1)

Q.12 Name the account which is opened to credit the share of profit of the deceased partner, till the time of his death to his Capital Account. (1)

Q. 13 Interest on capital will be paid to the partners if provided for in the partnership deed but only out of:

- | | | |
|-------------------------|--------------|-----|
| (a) Profits | (b) Reserves | |
| (c) Accumulated Profits | (d) Goodwill | (1) |

Q.14 What is meant by Inter-firm Comparison? (1)

Q.15 Goodwill of a firm of A and B is valued at Rs. 30,000. It is appearing in the books at Rs. 12,000. C is admitted for 1/4 share. What amount he is supposed to bring for goodwill?

- | | | |
|---------------|----------------|-----|
| (a) Rs. 3,000 | (b) Rs. 4,500 | |
| (c) Rs. 7,500 | (d) Rs. 10,500 | (1) |

Q.16 What is meant by 'Irredeemable Debentures'? (1)

Q.17 Total Capital employed in the firm is Rs. 8,00,000, reasonable rate of return is 15% and Profit for the year is Rs. 12,00,000. The value of goodwill of the firm as per capitalization method would be:

- | | | |
|-------------------|-------------------|-----|
| (a) Rs. 82,00,000 | (b) Rs. 12,00,000 | |
| (c) Rs. 72,00,000 | (d) Rs. 42,00,000 | (1) |

Q.18 What is deferred tax liability? (1)

Q.19 State the interest of tax authorities in the analysis of financial statements. (1)

Q.20 A and B are partners in a firm sharing profits and losses in the ratio of 3:2. A new partner C is admitted. A surrenders 1/15th share of his profit in favour of C and B surrenders 2/15th of his share in favour of C. The new ratio will be:

- | | | |
|-----------|-------------|-----|
| (a) 8:4:3 | (b) 42:26:7 | |
| (c) 4:8:3 | (d) 26:42:7 | (1) |

Q.21 Interest on debentures issued as a collateral security is paid on:
(a) Nominal value of debentures (b) No interest is paid
(c) Face value of debentures (d) Paid up value of debentures (1)

Q.22 Amount received from sale of grass by a club should be treated as:
(a) Capital Receipt (b) Revenue Receipt
(c) Asset (d) Earned Income (1)

Q.23 Y is a partner in a firm. He withdrew regularly Rs. 3,000 at the end of every month for the six months ending 31st March, 2019. If interest on drawings is charged @ 10% p.a. the interest charged will be:
(a) Rs. 375 (b) Rs. 450
(c) Rs. 525 (d) Rs. 900 (1)

Q.24 Unclaimed dividend appears in a Company's balance Sheet under the Sub-head.....
(a) Short-term Borrowings (b) Trade Payables
(c) Other Current Liabilities (d) Short-term Provisions (1)

Q.25 Which analysis is considered as static:
(a) Horizontal Analysis (b) Vertical Analysis
(c) Internal Analysis (d) External Analysis (1)

Q.26 A, B and C are partners sharing profit or loss in the ratio of 2: 3 : 4. A retires and after A's retirement B and C agreed to share profit of loss in the ratio of 3 : 4 in future. Their gaining ratio will be:
(a) 2: 3 (b) 4 : 3
(c) 3 : 4 (d) 1 : 1 (1)

Q.27 If a General Donation of huge amount is received by a school, that donation is treated as:
(a) Revenue Receipt (Income) (b) Capital Receipt (Liability)
(c) Assets (d) Earned Income (1)

Q. 28 A Company forfeited 300 shares of Rs. 10 each, Rs. 8 per share called up, on which X had paid application and allotment money of Rs. 6 per share. Share Forfeiture Account will be credited with:

- | | | |
|---------------|---------------|-----|
| (a) Rs. 600 | (b) Rs. 1,800 | |
| (c) Rs. 1,200 | (d) Rs. 2,400 | (1) |

Q.29 The excess amount which the firm can get on selling its assets over and above the saleable value of its assets is called:

- | | | |
|-------------|------------------|-----|
| (a) Surplus | (b) Super profit | |
| (c) Reserve | (d) Goodwill | (1) |

Q.30 Which one of the following items is shown under the heading 'current liabilities' in the Balance Sheet of a company?

- | | | |
|------------------------|------------------|-----|
| (a) Investments | (b) Reserve Fund | |
| (c) Unclaimed Dividend | (d) Livestock | (1) |

Q.31 For whom analysis of financial statements is not significant?

- | | | |
|---|--|-----|
| (a) Political Adviser of Prime Minister | | |
| (b) Investors | | |
| (c) Management | | |
| (d) Financial Institutions | | (1) |

Q.32 A, B and C were partners sharing profit and losses in the ratio of 2:2:1. Books are closed on 31st March every year. C dies on 5th November, 2018. Under the partnership deed, the executors of the deceased partner are entitled to his share of profit to the date of death, calculated on the basis of last year's profit. Profit for the year ended 31st March, 2018 was Rs. 2,40,000. C's share of profit will be:

- | | | |
|----------------|----------------|-----|
| (a) Rs. 28,000 | (b) Rs. 32,000 | |
| (c) Rs. 28,800 | (d) Rs. 48,000 | (1) |

Q.33 Issued 4,000, 12% debentures of Rs. 100 each at a premium of 4%, redeemable at a premium of 10%. In such case:

- | | | |
|--|--|-----|
| (a) Loss on Issue will be debited by Rs 24,000 | | |
| (b) Loss on Issue will be debited by Rs 56,000 | | |
| (c) Loss on Issue will be debited by Rs 40,000 | | |
| (d) Premium on Redemption will be credited by Rs. 24,000 | | (1) |

Q.34 On dissolution, partner's loan is transferred to:
(a) Partner's Capital Account (b) Realisation Account
(c) Partner's Loan Account (d) Revaluation Account (1)

Q.35 While preparing the Balance Sheet of a Company which item is shown under the head 'Long term Borrowings'?

(a) 6% Debentures (b) Security Premium Reserve
(c) Trade Payables (d) None of the above (1)

Q. 36 State whether the statement is True or False:
Old Ratio-Sacrificing Ratio= New Ratio (1)

Q. 37 State any one purpose for admitting a new partner in a firm. (1)

Q. 38 Partnership is born by _____ . (1)

Q. 39 State whether the statement is True or False:
Normal Profit- Actual Profit= Super Profit (1)

Q. 40 A debenture holder is entitled to:
(a) Fixed Dividend (b) Shares in profits
(c) Voting rights in the company (d) Interest at the fixed rate (1)

SUBJECTIVE TYPE QUESTIONS

TIME: 1:30 Hrs.

MM: 60

GENERAL INSTRUCTIONS:

- All parts of the questions should be attempted at one place.
- Marks are indicated against each question.
- Show your working clearly, wherever required.

Q.1 Akash Ltd. is registered with an authorized capital of Rs. 8,00,00,000 divided into equity shares of Rs. 10 each. Subscribed and fully paid up shared capital of the company was Rs. 4,00,00,000. For providing

employment to the local youth and for the development of the rural areas of the Jammu and Kashmir State the company decided to set up a food processing unit in Anantnag district. The Company also decided to open skill development centres in Ladakh, Srinagar and Punch. To meet its new financial requirements the company decided to issue 1,00,000 equity shares of Rs. 10 each and 10,000, 9% debentures of Rs. 100 each. The debentures were redeemable after five years. The issue of equity shares and debentures was fully subscribed. A shareholder holding 1,000 shares failed to pay the final call of Rs. 2 per share.

You are required to show the share capital in the Balance sheet of the company as per Schedule III of the Companies Act, 2013. Also, prepare note to Accounts.

OR (3)

The goodwill of a firm is valued at Rs. 1,35,000 at 3 years' purchase of super profit. Determine the missing values:

$$\text{Average Profit} = \text{Rs. } \frac{3,60,000}{3} = \text{Rs. } 1,20,000$$

$$\text{Normal Profit} = \text{Rs. } \dots\dots\dots \times \frac{15}{100} = \text{Rs. } \dots\dots$$

$$\begin{aligned} \text{Super Profit} &= \text{Average Profit} - \text{Normal Profit} \\ &= \text{Rs. } 1,20,000 - \text{Rs. } \dots\dots\dots = \text{Rs. } \dots\dots \end{aligned}$$

$$\text{Goodwill} = \text{Super Profit} \times \text{No. of Years' Purchase.}$$

Q.2 State any three objectives of analysis of financial statements? (3)

Q.3 Bhavya and Sakshi are partners in a firm, sharing profits and losses in the ratio of 3:2. On 31st March, 2018 their Balance Sheet was as under:

Balance Sheet of Bhavya and Sakshi
As at 31st March, 2018

Liabilities	Amount (Rs.)	Assets	Amount (Rs.)
Sundry Creditors	13,800	Furniture	16,000
General Reserve	23,400	Land and Building	56,000
Investment Fluctuation Fund	20,000	Investments	30,000
Bhavya's Capital	50,000	Trade Receivables	18,500
Sakshi's Capital	40,000	Cash in Hand	26,700
	1,47,200		1,47,200

The partners have decided to change their profit sharing ratio to 1: 1 with immediate effect. For the purpose, they decided that:

- a. Investments to be valued at Rs. 20,000
- b. Goodwill of the firm valued at Rs. 24,000
- c. General Reserve not to be distributed between the partners.

You are required to pass necessary journal entries in the books of the firm.
Show Workings. (4)

Q.4 A, B and C are partners in a firm. According to the Partnership Deed, the partners are entitled to draw Rs. 7,000 per month. On the 1st day of every month A, B and C drew Rs. 7,000; Rs. 6,000 and Rs. 5,000 respectively. Interest on capitals and interest on drawings are fixed @ 8% and 10% respectively. Profit for the year ended 31st March, 2018 was Rs. 7,55,000 out of which Rs. 2,00,000 are to be transferred to General Reserve. B and C are entitled to receive salary of Rs. 30,000 and Rs. 45,000 p.a. respectively and A is entitled to receive commission @ 10 % on net distributable profits after charging such commission. On 1st April, 2017, the balances of their Capital Accounts were Rs. 5,00,000; Rs. 4,00,000 and Rs. 3,50,000 respectively.

Prepare Profit and Loss Appropriation Account for the year ended 31st March, 2018.

OR (4)

A and B share profits and losses in the ratio of 3 : 2. They have decided to dissolve the firm. Assets and external liabilities have been transferred to Realisation A/c. Pass the journal entries to effect the following:

- (a) Bank Loan of Rs. 12,000 is paid off.
- (b) A was to bear all expenses of realisation for which he is given a commission of Rs 400.
- (c) Deferred Advertisement Expenditure A/c appeared in the books at Rs 28,000.
- (d) Stock worth Rs 1,600 was taken over by B at Rs 1,200.

Q.5 Under which major heads and sub-heads will the following items be presented in the Balance Sheet of the company as per Schedule III, Part I of the Companies Act, 2013?

- i) Bank Overdraft
- ii) Subsidy Reserve
- iii) Capital Redemption Reserve
- iv) Mining Rights
- v) Patents
- vi) Debit balance in the Statement of profit and loss
- vii) Debenture Redemption Reserve
- viii) Provision for Taxation (4)

Q.6 a) Exe Ltd. purchased assets of Rs. 8,40,000 and took over liabilities of Rs. 80,000 of Whe Ltd. at an agreed value of Rs. 7,20,000. Exe Ltd. issued 10% Debentures of Rs. 100 each at 10% discount in full satisfaction of the price. Pass journal entries in the books of Exe Ltd.

b) E Ltd. issues Rs. 60,00,000; 12% Debentures of Rs. 100 each at a discount of 5% repayable at a premium of 10% at the end of 5 years. Pass journal entries for the issue of debentures. (4)

Q.7 From the following particulars of a club, calculate the amount of salaries to be shown in Income and expenditure account for the year ended 31 March, 2008:-

Total salaries paid during the year 2007-08	Rs. 87,000	
Outstanding salaries on 01-04-2007	Rs. 17,000	
Prepaid salaries on 01-04-2007	Rs. 19,000	
Outstanding salaries on 31-03-2008	Rs. 32,000	
Prepaid salaries on 31-03-2008	Rs 20,000	(4)

Q.8 X, Y and Z were partners in a firm. On 1st April, 2016 their capitals stood at Rs. 6,00,000, Rs. 4,00,000 and Rs. 2,00,000 respectively. As per provisions of the partnership deed:

- a) Y was entitled for commission of Rs. 12,000 p.a.
- b) X was entitled for a salary of Rs. 1,200 per month.
- c) Partners were entitled to interest on capital @ 8% p.a.
- d) Profits were to be shared in the ratio of capitals.

Net profit for the year ended 31.03.2017 was Rs. 4,22,400 which was distributed equally, without taking into consideration the above provisions. Showing your workings clearly, pass necessary adjustment entry for the above. (6)

Q.9 X, Y and Z were partners in a firm sharing profits and losses in the ratio of 5:3:2. Their books are closed on March 31st every year.

X died on 30th September, 2019.

- (i) His share of Capital i.e., Rs. 5,00,000 along with his share of goodwill. The total goodwill of the firm was valued at Rs. 60,000.
(ii) His share of profit up to his date of death on the basis of sales till date of death. Sales for the year ended March 31, 2019 was Rs. 2,00,000 and profit for the same year was 10% on sales. Sales shows a growth trend of 20% and percentage of profit earning is reduced by 1%.

Pass necessary journal entries and calculate the deceased partner's current year's profits of the firm. (6)

Q.10 Ashish and Neha were partners in a firm sharing profits and losses in the ratio of 4:3. They decided to dissolve the firm on 1st May, 2014. From the information given below, complete Realisation Account, Partner's Capital Accounts and Bank Account:

Realisation Account

Dr.	Rs.	Cr.	Rs.
To Sundry Assets:		By Sundry Liabilities:	
Machinery	5,60,000	Creditors	40,000
Stock	90,000	Ashish's wife's loan	25,000
Debtors	55,000	By Bank:	
To bank		Machinery	4,80,000
Creditors	?	Debtors	10,000
To Ashish's Capital A/c		By Ashish's Cap A/c	
Ashish's wife's Loan	34,000	Stock	1,28,000
To Neha's Cap. A/c		Typewriter	<u>70,000</u>
Realisation Expenses	7,000	By Neha's Cap A/c	40,000
To Gain (profit) transferred to:		Debtors	
Ashish's Capital A/c	4,000		
Neha's capital A/c	<u>3,000</u>		
	<u>7,000</u>		
	<u>7,93,000</u>		<u>7,93,000</u>

Partner's Capital Accounts

Dr.

Cr.

Particulars	Ashish (Rs.)	Neha (Rs.)	Particulars	Ashish(Rs.)	Neha (Rs.)
To Realisation A/c	?	?	By.....	?	?
To Bank A/c	4,00,000	4,50,000	By.....	?	?
			By.....	?	?
	?	?		?	?

Bank Account

Dr.

Cr.

Particulars	Rs.	Particulars	Rs.
To Balance b/d	?	By Realisation A/c	?
To realization A/c	4,90,000	By Ashish's Loan A/c	4,000
		By Ashish's Cap A/c	4,00,000
		By Neha's Cap A/c	?
	?		?

OR

(6)

From the following Receipt and Payment Account and additional information of Ashoka Club for the year ended 31-3-2007 prepare:

- a) Income and Expenditure Account of the Club for the year ended 31-3-2007 and
- b) Prepare the Balance Sheet as 31-3-2007.

Receipts	Rs.	Payments	Rs.
Balance b/d	25,000	Salary	6,000
Subscriptions :		Newspapers	4,100
2005-2006 2,400			
2006-2007 53,000			
2007-2008 <u>1,000</u>	56,400		
Entrance Fees	2,500	Electricity bill	2,000
Municipal Grant	20,000	Fixed deposit	40,000

		(on 1-1-2007 @ 9% p.a.)	
Sale of old Furniture (Book Value Rs. 8,000)	11,400	Books	21,200
		Rent	13,600
		Furniture	21,000
		By balance c/d	7,400
	<u>1,15,300</u>		<u>1,15,300</u>

Additional Information:

- Subscriptions outstanding as on 31-3-2006 were Rs. 3,000 and on 31-3-2007 Rs. 6,000.
- On 31-3-2006 salary outstanding was Rs. 900 and on 31-3-2007 salary outstanding was Rs. 1,200.
- The Club owned furniture Rs. 30,000 and books Rs. 14,000 on 1-4-2006.

Q.11 A Ltd. invited applications for issuing 1,00,000 shares of Rs. 10 each at a premium of Rs. 1 per share. The amount was payable as follows:

On Application	Rs. 3 per share
On Allotment	Rs. 3 per share (including premium)
On First Call	Rs. 3 per share
On Second and Final Call	Balance Amount

Applications for 1,60,000 shares were received. Allotment was made on the following basis:

- To Applicants for 90,000 shares : 40,000 shares
- To Applicants for 50,000 shares : 40,000 shares
- To Applicants for 20,000 shares : full shares

Excess money paid on application is to be adjusted against the amount due on allotment and calls.

Rishabh, a shareholder, who applied for 1,500 shares and belonged to category (ii), did not pay allotment, first and second and final call money. Another shareholder, Sudha, who applied for 1,800 shares and belonged to category (i), did not pay the first and second and final call money.

All the shares of Rishabh and Sudha were forfeited and were subsequently re-issued at Rs. 7 per share fully paid.

Pass the necessary journal entries in the books of A Ltd. Open Calls-in-Arrears Account and Calls-in-Advance Account wherever required.

OR

(8)

X Ltd. invited applications for issuing 50,000 equity shares of Rs. 10 each. The amount was payable as follows:

On Application	Rs. 2 per share
On Allotment	Rs. 2 per share
On First Call	Rs. 3 per share
On Second and Final Call	Balance Amount

Applications for 70,000 shares were received. Applications for 10,000 shares were rejected and the application money was refunded.

Shares were allotted to the remaining applications on a pro-rata basis and excess money paid on application is to be adjusted against the amount due on allotment and calls, if any.

Gopal, a shareholder, who applied for 600 shares, paid his entire share money with application. Ghosh, who had applied for 6,000 shares, failed to pay the allotment money and his shares were immediately forfeited. These forfeited shares were re-issued to Sultan for Rs. 20,000; Rs. 4 per share paid up. The first call money and the second and final call money was called and duly received.

Pass the necessary journal entries in the books of X Ltd. Open Calls-in-Arrears Account and Calls-in-Advance Account wherever necessary.

Q.12 A and B are partners in a firm sharing profits in the ratio of 3:2. Their Balance Sheet as at 31st March, 2018 stood as:

Liabilities	Rs.	Assets	Rs.
Capitals:		Goodwill	10,000
A	86,000	Land & Buildings	60,000
B	<u>64,000</u>	Plant & Machinery	70,000
General Reserve	20,000	Stock	36,000
Creditors	31,200	Sundry Debtors	20,000
		Cash at Bank	4,000
		Cash in hand	1,200
	2,01,200		2,01,200

On 1st April 2018, they admitted C into partnership introducing capital of Rs. 50,000. C is unable to bring in any cash for Goodwill. So, it is decided to value the goodwill at Rs. 40,000 for the time. He acquired 1/5th share in the profits, equally from both the partners. It was also decided that:

- (i) Stock be written down by Rs. 3,200.
- (ii) Land and Building be written off by Rs. 20,000
- (iii) A Provision of Rs. 1,000 be created for doubtful debts.
- (iv) An amount of Rs. 1,200, included in Sundry Creditors, be written off as it is no longer payable.

Prepare necessary accounts and balance sheet of new firm.

OR (8)

X, Y and Z are in partnership sharing profits in the ratio of 5:3:2. Their Balance Sheet as at 1st April, 2018, the day Y decided to retire was as follows:

Liabilities	Rs.	Assets	Rs.
Bills Payable	3,000	Cash at Bank	25,000
Creditors	7,000	Stock	5,000
General Reserve	10,000	Investment	10,000
Capital A/cs:		Debtors	10,000
X 30,000		Buildings	25,000
Y 20,000		Plant & Machinery	15,000
Z <u>20,000</u>	70,000		
	<u>90,000</u>		<u>90,000</u>

The following was agreed upon:

- i. Y sells his share of goodwill to X for Rs. 8,000 and to Z for Rs. 4,000
- ii. Stock to be appreciated by 20% and buildings by Rs. 5,000.
- iii. Outstanding Expenses be brought down to Rs. 3,000.
- iv. Investments were sold for Rs. 22,000
- v. Y is paid off in cash.

Prepare necessary Ledger Accounts and the Balance sheet.

END

Chemistry (Objective)

Time : 1.5 hrs.

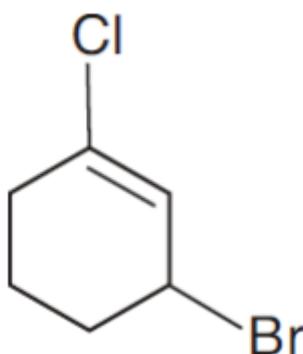
M. Marks : 50

General Instructions

- (a) All questions are compulsory.
- (b) Q.no. 1 to 20 are very short answer questions (objective type & one word or one sentences) carry 1 mark each.
- (c) Q.no. 21 to 35 are short answer questions (objective type) and carry 2 marks each.

Questions 1 to 13 are multiple choice questions:

1. The IUPAC name of the compound shown below is:



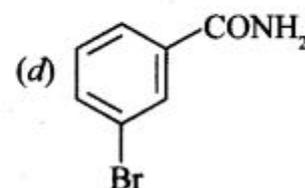
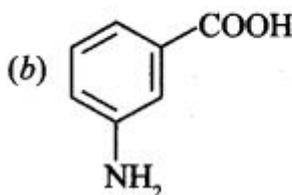
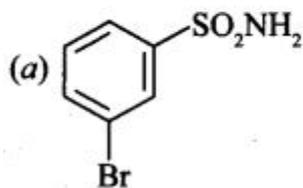
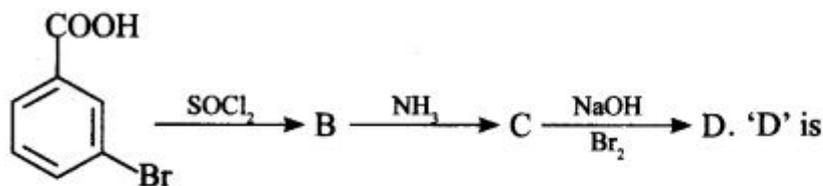
- (a) 2-bromo-6-chlorocyclohex-1-ene
 - (b) 6-bromo-2-chlorocyclohexene
 - (c) 3-bromo-1-chlorocyclohexene
 - (d) 1-bromo-3-chlorocyclohexene
2. A conductivity cell containing electrodes made up of
- (a) Gold
 - (b) Silver
 - (c) Platinised platinum
 - (d) Copper
3. NH_4Cl is used in salt bridge because
- (a) it forms a jelly like material with agar-agar.
 - (b) it is a weak electrolyte.
 - (c) it is a good conductor of electricity.
 - (d) the transport number of NH_4^+ and NO_3^- ions are almost equal.

4. An unripe mango placed in a concentrated salt solution to prepare pickle, shrivels because _____
- (a) it gains water due to osmosis.
 - (b) it loses water due to reverse osmosis.
 - (c) it gains water due to reverse osmosis.
 - (d) it loses water due to osmosis.
5. The value of Henry's constant K_H is _____
- (a) greater for gases with higher solubility.
 - (b) greater for gases with lower solubility.
 - (c) constant for all gases.
 - (d) not related to the solubility of gases.
6. Which of the following are d-block elements but not regarded as transition elements?
- (a) Cu, Ag, Au
 - (b) Zn, Cd, Hg
 - (c) Fe, Co, Ni
 - (d) Ru, Rh, Pd
7. Transition elements form alloys easily because they have
- (a) Same atomic number
 - (b) Same electronic configuration
 - (c) Nearly same atomic size
 - (d) None of the above
8. Among the ligands NH_3 , en, CN^- and CO, the correct order of field strength is
- (a) $\text{NH}_3 < \text{en} < \text{CN}^- < \text{CO}$
 - (b) $\text{CN}^- < \text{NH}_3 < \text{CO} < \text{en}$
 - (c) $\text{en} < \text{CN}^- < \text{NH}_3 < \text{CO}$
 - (d) $\text{CO} < \text{NH}_3 < \text{en} < \text{CN}^-$
9. IUPAC name of $[\text{Pt}(\text{NH}_3)_3 \text{Br} (\text{NO}_2) \text{Cl}] \text{Cl}$ is
- (a) triamminechlorodibromidoplatinum (IV) chloride
 - (b) triamminechloridobromidonitrochloride- platinum (IV) chloride
 - (c) triamminebromidochloridonitroplatinum (IV) chloride
 - (d) triamminenitrochlorobromoplatinum (IV) chloride
10. Which of the following has square planar structure?
- (a) $[\text{NiCl}_4]^{2-}$
 - (b) $[\text{Ni}(\text{CO})_4]$
 - (c) $[\text{Ni}(\text{CN})_4]^{2-}$
 - (d) None of these

11. CH_3CHO and $\text{C}_6\text{H}_5\text{CH}_2\text{CHO}$ can be distinguished chemically by

- (a) Benedict's test
- (b) Iodoform test
- (c) Tollen's reagent test
- (d) Fehling's solution test

12.



13. The product formed by the reaction of an aldehyde with a primary amine is

- (a) Carboxylic acid
- (b) Aromatic acid
- (c) Schiff's base
- (d) Ketone

Read the given passage and answer the questions 14 to 17 that follow:

A Lead storage battery is the most important type of secondary cell having a lead anode and a grid of lead packed with PbO_2 as cathode. A 38% solution of sulphuric acid is used as electrolyte. (Density = 1.294 g mL^{-1}) The battery holds 3.5 L of the acid. During the discharge of the battery, the density of H_2SO_4 falls to 1.139 g mL^{-1} . (20% H_2SO_4 by mass).

(14) Write the reaction taking place at the cathode when the battery is in use.

(15) How much electricity in terms of Faraday is required to carry out the reduction of one mole of PbO_2 ?

(16) What is the molarity of sulphuric acid before discharge?

(17) Write the products of electrolysis when dilute sulphuric acid is electrolysed using Platinum electrodes.

Questions 18 to 20 are one word answers:

(18) Name the species formed when an aqueous solution of amino acid is dissolved in water?

(19) Which of the following compounds would undergo Cannizzaro reaction:

Benzaldehyde, Cyclohexanone, 2-Methylpentanal.

(20) Arrange the following compounds in increasing order of their acid strength:

Benzoic acid, 4-Nitrobenzoic acid, 3,4-Dinitrobenzoic acid, 4-Methoxybenzoic acid.

Questions 21 to 35 are multiple choice questions: (2 marks each)

21. The emf of the cell:

$\text{Ni} / \text{Ni}^{2+} (1.0 \text{ M}) // \text{Au}^{3+} (1.0 \text{ M}) / \text{Au}$ ($E^\circ = -0.25 \text{ V}$ for Ni^{2+}/Ni ; $E^\circ = 1.5 \text{ V}$ for Au^{3+}/Au) is

- (a) 1.25 V
- (b) -1.25 V
- (c) 1.75 V
- (d) 2.0 V

22. If $E^\circ_{\text{Fe}^{2+}/\text{Fe}} = -0.441 \text{ V}$ and $E^\circ_{\text{Fe}^{3+}/\text{Fe}^{2+}} = 0.771 \text{ V}$, the standard EMF of the reaction,

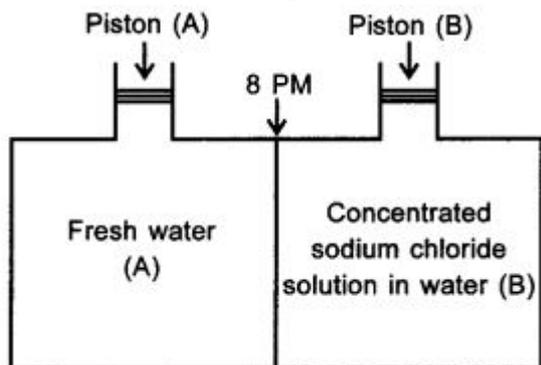
$\text{Fe} + 2\text{Fe}^{3+} \rightarrow 3\text{Fe}^{2+}$ will be

- (a) 1.212 V
- (b) 0.111 V
- (c) 0.330 V
- (d) 1.653 V

23. Which of the following aqueous solutions should have the highest boiling point?

- (a) 1.0 M NaOH
- (b) 1.0 M Na_2SO_4
- (c) 1.0 M NH_4NO_3
- (d) 1.0 M KNO_3

24. Consider the figure and mark the correct option.



(a) water will move from side (A) to side (B) if a pressure lower than osmotic

pressure is applied on piston (B).

(b) water will move from side (B) to side (A) if a pressure greater than osmotic , pressure is applied on piston (B).

(c) water will move from side (B) to side (A) if a pressure equal to osmotic pressure is applied on piston (B).

(d) water will move from side (A) to side (B) if pressure equal to osmotic pressure is applied on piston (A).

25. When 1 mole of benzene is mixed with 1 mole of toluene (vapour pressure of benzene – 12.8 kPa, Toluene = 3.85 kPa)

(a) The vapour will contain equal amount of benzene and toluene.

(b) Not enough information is given for prediction.

(c) The vapour will contain a higher percentage of benzene.

(d) The vapour will contain higher percentage of toluene.

26. In which of the following pairs, both the ions are coloured in aqueous solutions?

(a) Sc^{3+} , Ti

(b) Sc^{3+} , Co^{2+}

(c) Ni^{2+} , Cu^+

(d) Ni^{2+} , Ti^{3+}

[Atomic no of Sc = 21, Ti = 22, Ni = 28, Co = 27, Cu = 29]

27. The CFSE for octahedral $[\text{CoCl}_6]^{4-}$ is $18,000 \text{ cm}^{-1}$. The CFSE for tetrahedral $[\text{CoCl}_4]^{2-}$ will be

(a) $18,000 \text{ cm}^{-1}$

(b) $16,000 \text{ cm}^{-1}$

(c) $8,000 \text{ cm}^{-1}$

(d) $20,000 \text{ cm}^{-1}$

28. The correct order of increasing acidic strength is _____.

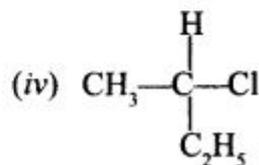
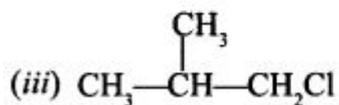
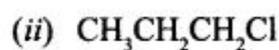
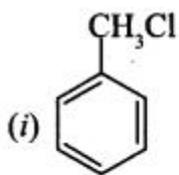
(a) Phenol < Ethanol < Chloroacetic acid < Acetic acid

(b) Ethanol < Phenol < Chloroacetic acid < Acetic acid

(c) Ethanol < Phenol < Acetic acid < Chloroacetic acid

(d) Chloroacetic acid < Acetic acid < Phenol < Ethanol

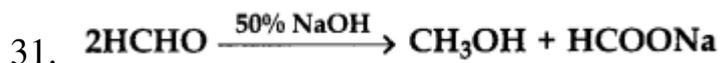
29. Which of the following compound will undergo racemisation when reacts with aq. KOH?



- (a) (i) and (ii)
(b) (ii) and (iv)
(c) (iii) and (iv)
(d) (iv)

30. Correct order of decreasing reactivity of nucleophilic addition in case of HCHO , CH_3CHO and CH_3COCH_3 is

- (a) $\text{CH}_3\text{COCH}_3 > \text{CH}_3\text{CHO} > \text{HCHO}$
(b) $\text{HCHO} > \text{CH}_3\text{CHO} > \text{CH}_3\text{COCH}_3$
(c) $\text{CH}_3\text{COCH}_3 > \text{HCHO} > \text{CH}_3\text{CHO}$
(d) $\text{CH}_3\text{CHO} > \text{HCHO} > \text{CH}_3\text{COCH}_3$



The above chemical reaction represents

- (a) Rosenmund's reaction.
(b) Cannizzaro's reaction.
(c) Kolbe's reaction,
(d) Etard's reaction.

32. or distinction between pentan-2-one and pentan-3-one, which reagent can be employed?

- (a) $\text{K}_2\text{Cr}_2\text{O}_7/\text{H}^+$
(b) ZnHg/HCl
(c) NaOH/I_2
(d) $\text{AgNO}_3/\text{NH}_4\text{OH}$

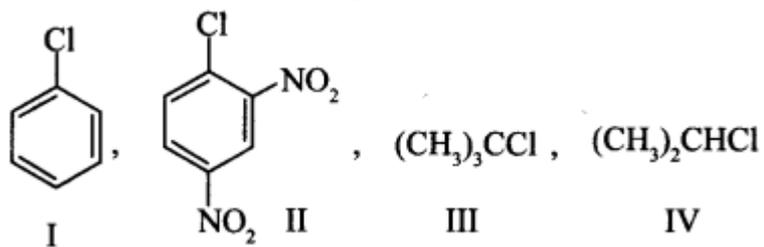
33. Compound 'A' $\text{C}_5\text{H}_{10}\text{O}$ forms a phenyl hydrazone and gives a negative Tollen's reagent test and iodoform test. On reduction with $\text{Zn}+\text{Hg}/\text{HCl}$, compound A gives n-pentane. The compound 'A' is

- (a) Primary alcohol
(b) Aldehyde
(c) Secondary alcohol
(d) Ketone

34. Which of the following is most reactive towards SN1 reaction?

- (a) $\text{C}_6\text{H}_5\text{C}(\text{CH}_3)\text{C}_6\text{H}_5\text{Br}$
- (b) $\text{C}_6\text{H}_5\text{CH}_2\text{Br}$
- (c) $\text{C}_6\text{H}_5\text{CH}(\text{C}_6\text{H}_5)\text{Br}$
- (d) $\text{C}_6\text{H}_5\text{CH}(\text{CH}_3)\text{Br}$

35. The correct order of increasing the reactivity of C—X bond towards nucleophile in following compounds



- (a) $\text{IV} < \text{III} < \text{I} < \text{II}$
- (c) $\text{I} < \text{II} < \text{IV} < \text{III}$
- (b) $\text{III} < \text{II} < \text{I} < \text{IV}$
- (d) $\text{II} < \text{III} < \text{I} < \text{IV}$

Half Yearly Sample paper XII 2020-21

Chemistry (Subjective)

Time : 1.5 hrs.

M. Marks : 50

General Instructions

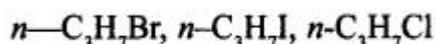
There are 18 questions in the question paper. All questions are compulsory.

(i) Very Short answer type questions, carrying 2 marks each. Answer to these questions should not exceed 20 to 30 words.

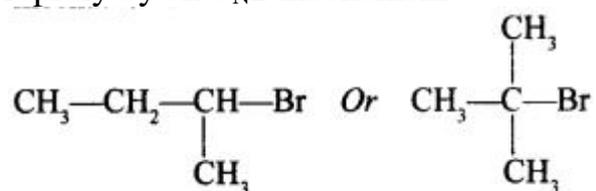
(ii) Short answer type questions, carrying 3 marks each. Answer to these questions should not exceed 50 to 60 words.

(iii) Long answer type questions, carrying 5 marks each. Answer to these questions should not exceed 80 to 90 words.

1. Why does white ZnO (s) becomes yellow upon heating?
2. Under which situations can an amorphous substance change to crystalline form?
3. Why are solids incompressible?
4. Why glass panes fixed to windows or doors of old buildings are found to be thicker at the bottom?
5. What is anti-freeze?
6. What is meant by 'reverse osmosis'?
7. E° (reduction potential) of Cu and Zn are + 0.34 V and – 0.76 V respectively. Which of them is stronger reducing agent?
8. Write the correct representation of cell:
 $2\text{Cr}(s) + 3\text{Cd}^{2+}(\text{aq}) \rightarrow 2\text{Cr}^{3+}(\text{aq}) + 3\text{Cd}(s)$
9. Which type of magnetic behaviour is generally shown by transition elements?
10. Why do transition metals show variable oxidation states?
11. Calculate the freezing point of a solution containing 60 g of glucose (molar mass 180 g mol^{-1}) in 250 g of water. [K_f for water = $1.86 \text{ K kg mol}^{-1}$]
12. Arrange the following haloalkanes in the increasing order of their densities:



13. Which alkyl halide from the following pair would you expect to react more rapidly by an S_N2 mechanism?



14. Write the mechanism of the reaction of HI with methoxybenzene.

15. (a) Name the starting material used in the industrial preparation of phenol.

(b) Write complete reaction for the bromination of phenol in aqueous and non aqueous medium.

(c) Explain why Lewis acid is not required in bromination of phenol?

16. What product will be formed on reaction of propanal with 2-methylpropanal in the presence of NaOH? What products will be formed? Write the name of the reaction also.

17. Compound 'A' was prepared by oxidation of compound 'B' with alkaline KMnO_4 . Compound 'A' on reduction with lithium aluminium hydride gets converted back to compound 'B'. When compound 'A' is heated with compound B in the presence of H_2SO_4 it produces fruity smell of compound C to which family the compounds 'A', 'B' and 'C' belong to?

18. Carboxylic acids contain carbonyl group but do not show the nucleophilic addition reaction like aldehydes or ketones. Why?

SAMPLE QUESTION PAPER
BIOLOGY-12TH
PART-A(OBJECTIVE)

Time - 1.5 hrs

MM-50

1- All questions are compulsory.

2-Multiple choice questions (MCQ) carrying two marks each.

1. How many microspore mother cells are required to produce 1000 microspores/pollen grains?

- (a) 100
- (b) 150
- (c) 200
- (d) 250

2. Which of the following represents the female gametophyte in angiosperms?

- (a) Embryo
- (b) Embryo sac
- (c) Synergid
- (d) Endosperm

3. In a breeding experiment, the selected male parent is diploid and the female parent is tetraploid. What will be the ploidy level of the endosperm that will develop after double fertilisation?

- (a) Diploid
- (b) Triploid
- (c) Tetraploid
- (d) Pentaploid

4. The development of fruits without fertilisation of the ovary, is called

- (a) parthenogenesis
- (b) parthenocarpy
- (c) agamospermy
- (d) apomixis

5. When the pollen of a flower is transferred to the stigma of another flower on the same plant, the process is known as

- (a) autogamy
- (b) geitonogamy
- (c) xenogamy
- (d) cleistogamy

6. The number of meiotic divisions, required to produce 400 seeds in a pea plant, is

- (a) 100
- (b) 200
- (c) 400
- (d) 50

7. A dicotyledonous plant bears flowers but never produces fruits and seeds. The most probable cause for the above situation is [NCERT Exemplar]

- (a) plant is dioecious and bears only pistillate flowers.
- (b) plant is dioecious and bears both pistillate and staminate flowers.
- (c) plant is monoecious.
- (d) plant is dioecious and bears only staminate flower

8. Autogamy can occur in a chasmogamous flower if [NCERT Exemplar]

- (a) pollen matures before maturity of ovule.
- (b) ovules mature before maturity of pollen.
- (c) both pollen and ovules mature simultaneously.
- (d) both anther and stigma are of equal lengths.

9. Choose the correct statement from the following.

- (a) Cleistogamous flowers always exhibit autogamy.
- (b) Chasmogamous flowers always exhibit geitonogamy.
- (c) Cleistogamous flowers exhibit both autogamy and geitonogamy.
- (d) Chasmogamous flowers never exhibit autogamy.

10. From among the situations given below, choose the one that prevents both autogamy and geitonogamy

- (a) Monoecious plant bearing unisexual flowers.
- (b) Dioecious plant bearing only male or female flowers.
- (c) Monoecious plant with bisexual flowers.
- (d) Dioecious plant with bisexual flowers.

11. In a fertilised embryo sac, the haploid, diploid and triploid structures are]

- (a) Synergid, zygote and primary endosperm nucleus.
- (b) Synergid, antipodal and polar nuclei.
- (c) Antipodal, synergid and primary endosperm nucleus.
- (d) Synergid, polar nuclei and zygote.

12. In an embryo sac, the cells that degenerate after fertilisation are:

- (a) Synergids and primary endosperm cell.
- (b) Synergids and antipodals.

- (c) Antipodals and primary endosperm cell.
- (d) Egg and antipodals.

13. Which of the following floral parts forms the pericarp after fertilisation?

- (a) Nucellus
- (b) Outer integument
- (c) Ovary wall
- (d) Inner integument

14. Vas deferens receives the duct of seminal vesicle and forms the

- (a) epididymis
- (b) urethra
- (c) ejaculatory duct
- (d) urethral meatus

15. How many functional sperms and how many ova will be formed by a primary spermatocyte and a primary oocyte, respectively?

- (a) One, One
- (b) One, Four
- (c) Four, One
- (d) Four, Four

16. Proliferative phase of menstrual cycle, is also called

- (a) follicular phase
- (b) luteal phase
- (c) secretory phase
- (d) ovulatory phase

17. There is no cell division involved in

- (a) spermatogenesis
- (b) oogenesis
- (c) embryogenesis
- (d) spermiogenesis

18. After the release of the secondary oocyte, the Graafian follicle develops into

- (a) corpus callosum
- (b) corpus albicans
- (c) corpus luteum
- (d) primary follicle

19. Which of the following glands is large sized at birth but reduces in size with aging?

- (a) Pineal
- (b) Pituitary
- (c) Thymus
- (d) Thyroid

20. Urethral meatus refers to the [NCERT Exemplar]

- (a) urinogenital duct
- (b) opening of vas deferens into urethra
- (c) external opening of the urinogenital duct
- (d) muscles surrounding the urinogenital duct

21. Morula is a developmental stage [NCERT Exemplar]

- (a) between the zygote and blastocyst
- (b) between the blastocyst and gastrula
- (c) after the implantation
- (d) between implantation and parturition

22. In a dihybrid cross, if you get 9:3:3:1 ratio it denotes that:

- (a) The alleles of two genes are interacting with each other.
- (b) It is a multigenic inheritance.
- (c) It is a case of multiple allelism.
- (d) The alleles of two genes are segregating independently

24. In sickle cell anaemia glutamic acid is '» replaced by valine. Which one of the following triplets codes for valine?

- (a) G G G
- (b) A A G
- (c) G A A
- (d) G U G

25. The substance produced by a cell on viral infection that can protect other cells from further infection is

- (a) serotonin
- (b) colostrum
- (c) interferon
- (d) histamine

SAMPLE PAPER
BIOLOGY-12TH
PART-B (SUBJECTIVE)

Time allowed: 1.5 hrs

MM-50

General Instructions:

1. All questions are compulsory.
2. Short answer type I(1-5) questions of two marks each.
3. Short answer type II(6-10) questions of three marks each.
4. Long(11-15) answer type questions of five marks each.

1- Name two diseases whose spread can be controlled by the eradication of Aedes mosquitoes.

2- Name two viral diseases transmitted by Aedes mosquito.

3- Why is Gamhusia introduced into drains and ponds?

4- How do cytokine barriers provide innate immunity in humans?

5- A garden pea plant produced axial violet flowers. Another of the same species produced terminal violet flowers. Identify the dominant traits.

6- How is pleiotropy exemplified in Drosophila?

7- How many chromosomes do drones of honeybee possess? Name the type of cell division involved in the production of sperms by them.

8- What are the factors responsible for the population explosion in India?

9- What are the important features of an ideal contraceptive?

10- What are the advantages and disadvantages of hormonal contraceptives?

11- Explain in detail the various developmental stages of the zygote until implantation with suitable diagrams.

12- With the help of a neat labelled diagram of the female reproductive system, depict the following sites:

(a) production of gamete

(b) site of fertilization

(c) site of implantation

(d) birth canal

13- Explain the structure of the pollen.

14- How is it that the embryo sacs of some apomictic species look normal but contain diploid cells?

15- Explain the structure of microsporangium.

St. PBN public School

Sample Paper- Economics (Objectives)

Class-XII

1. Which one leads to factor cost?(1)
 - a) Market price- Indirect taxes
 - b) Market price-Net Indirect taxes
 - c) Market price+ Indirect taxes
 - d) Market price+ Net Indirect taxes
2. In India, coins are issued by: (1)
 - a) SBI
 - b) RBI
 - c) Ministry of finance
 - d) Ministry of Urban development
3. When S changes from -30 to -20 , then change in Saving is equal to : (1)
 - a) -10
 - b) -20
 - c) -30
 - d) +10
4. An increase in AD must cause a rise in general price level. Write true or false with reason .(2)
5. Poverty is a cause of poverty .Write true or false with reason .(2)
6. What is subsistence farming? (1)
7. PDS implies distribution of food grains through _____ at subsidized rates. (1)
8. What are income generating assets? (1)

St. PBN public School

Sample Paper- Economics (Subjective)

Class-XII

M.M : 20

1. Write three observations suggesting benefits of WTO to the Indian economy. (3)
2. It is said that fiscal deficit is a reflection of fiscal indiscipline. How?(3)
3. Explain the role of legal reserve in correcting the inflationary gap and deficit demand in an economy.(4)
4. Distinguish between bank rate and repo rate with their bases.(4)
5. What do you mean by new economic policy? Describe in brief industrial sector reforms introduced under the new economic policy. (6)

St. PBN public School

Sample Paper- Business Studies (Objective)

Class-XII

1. Coordination is: (1)
 - a. A function of management
 - b. Essence of management
 - c. Part of management
 - d. None of the above
2. _____ Scientific technique brings uniformity in products and permits interchangeability.(1)
3. Maruti company was the first company to understand the need of middle class people and launch the small car concept and avails _____.(1)
4. Planning is the function of top level managers. (True/False)(1)
5. Which organizational structure is suitable for multi product manufacturing company?(1)
6. When is financial leverage favorable?(1)
7. Which marketing philosophy give more importance to consumer welfare instead of consumer certification.(1)
8. Firm shares an inform all the details about the product to customer through _____.(1)
9. Delegation is : (1)
 - a. Optional
 - b. Compulsory
 - c. Both
 - d. None of these
10. Demonetization was launched on 1st November 2016.(True/False)(1)

St. PBN public School

Sample Paper- Business Studies (Subjective)

Class-XII

1. Mediquip Ltd. is a company dealing in distribution of medical equipments. The company recently imported 15000 units of sugar testing machines to test the sugar levels without taking blood samples. For deciding the marketing strategy, the Chief Executive Officer of the company called a meeting of the marketing heads of different zones.

In the meeting, Sandeep, the North Zone Marketing Head, suggested that since the machines were sophisticated they need to visit hospitals personally, to explain its working to the hospital staff that would be using the machines. He also suggested that additional trained people may be recruited for the same.

Himanshu, another Zonal Head, added that since lot of money had been spent on the import of the machines, the company was short of funds to pay to the additional staff as suggested by Sandeep.

Rahul, a newly appointed Zonal Head of South Zone suggested that since the size of the order is not large, a detailed study of the factors determining the choice of channels of distribution is required before making the right choice.

 - a) Identify the factors influencing the choice of channels of distribution which were discussed in the meeting.
 - b) Also, explain briefly the other consideration to be taken care of in each factor identified in part (1). 3
2. Vrinda is an MBA pass out from a very good MBA college. Her father has restaurant business. Their company has 15 restaurants in Europe. As soon as Vrinda joins the business she decides to take this number to 25 by opening 10 more restaurants in the major cities of Europe.

What do you think will be the fixed capital requirement here? Why? 3
3. An established firm has fifty years of experience in shipping industry. The company time and again proves itself as one of the dominant figures in the market. The plan for the whole year is given a lot of importance. According to the owner of the company their plans are the basic structures upon which other important functions of management rest. It is important that the plans are communicated to the employees. The top management ensures that the plans are communicated and implemented at all levels and in all departments. To learn from past mistakes is a habit of this successful company. They prepare plans for short term as well as long term where it can be seen that throughout the year the plans are prepared one after another. Shipping industry needs such dedicated companies. The goals are specific

and the activities to achieve these specific goals are undertaken. The company has planned a growth of 20% in revenue this year. Let's see how much it's possible for it to achieve it by the end of the year.

In the above case identify the various features of planning highlighted.

Which type of plan is indicated in the above case?

4

4. Identify the various dimensions of business environment:

- a) With the election of a new government the sensex drops by 748 points.
- b) A particular channel refrains from showing the advertisement of a particular product as it is banned by the government.
- c) Software is in high demand among the industrial buyers as it can connect all the branches of a company as a single integrated unit.
- d) At the time of holi a large number of manufacturing firms get involved in making colors which are used in the celebration of this colorful festival.
- e) It is not advisable to open a luxury car showroom in the middle of an economy where per capita income is very low.

5

5. Home Creations Ltd.' is a well known chain of large department store offering various types of products under one roof. The company owns fifty stores in various parts of the country. Each store is placed under the charge of a manager who is allowed to run their stores autonomously by deciding about the products which may be promoted, appointment of staff, ways to handle customer complaints etc. As these managers have a deeper knowledge of the local situations, it enables them to take these decisions effectively keeping in view the local circumstances and consumers' needs. This approach helps to improve customer service and at the same time serves to boost morale and increase the job satisfaction of the store managers as it empowers them to innovate and use their initiatives.

In the context of above case:

- a) Identify and explain the policy followed by 'Home Creations Ltd.' to run their stores successfully.
- b) Also, give any three points highlighting the importance of the approach followed as identified in part (1) of the question.
- c) List any two values that 'Home Creations Ltd.' wants to communicate to its employees.

5

Half Yearly Examination
Class XII
Subject – Mathematics
OBJECTIVE SAMPLE PAPER

Time: 1:30 Hours

M.M:50

1. Let R be the relation in the set N given by $R = \{(a, b) : a=b-2, b>6\}$. Choose the correct answer (1)
- (i) $(2, 4) \in R$ (iii) $(6, 8) \in R$
(ii) $(3, 8) \in R$ (iv) $(8, 7) \in R$
2. Let $f: R \rightarrow R$ be defined as $f(x) = x^4$. Choose the correct answer (1)
- (i) f is one-one onto (iii) f is many-one onto
(ii) f is one-one but not onto (iv) f is neither on-one nor onto
3. $\sin\left(\frac{\pi}{3} - \sin^{-1}\left(-\frac{1}{2}\right)\right)$ is equal to (2)
- (i) 1 (iii) $\frac{1}{3}$
(ii) $\frac{1}{2}$ (iv) $\frac{1}{4}$
4. $\cos^{-1}\left(\cos\frac{7\pi}{6}\right)$ is equal to (1)
- (i) $\frac{7\pi}{6}$ (iii) $\frac{\pi}{6}$
(ii) $\frac{5\pi}{6}$ (iv) $\frac{\pi}{3}$
5. The restriction on n, k and p so that $PY+WY$ will be defined are: (1)
- (i) $k=3, p=n$ (iii) p is arbitrary, $k=3$
(ii) k is arbitrary, $p=2$ (iv) $k=2, p=3$
6. If $A = \begin{bmatrix} \cos \alpha & -\sin \alpha \\ \sin \alpha & \cos \alpha \end{bmatrix}$, then $A + A' = I$, if the value of α is (1)
- (i) $\frac{\pi}{6}$ (iii) $\frac{3\pi}{2}$
(ii) $\frac{\pi}{3}$ (iv) π
7. If the matrix A is both symmetric and skew symmetric, then (1)
- (i) A is diagonal matrix (iii) A is a square matrix
(ii) A is a zero matrix (iv) None of these
8. Let A be a square matrix of order 3×3 , then $|kA|$ is equal to (1)
- (i) $k|A|$ (iii) $k^3|A|$
(ii) $k^2|A|$ (iv) $3k|A|$
9. If area of triangle is 35 sq. units with vertices (2, -6), (5, 4) and (k, 4). Then k is (2)
- (i) 12 (iii) 12, -2

(ii) -2 (iv) -12, -2

10. If A is an invertible matrix of order 2, then $\det(A^{-1})$ is equal to (1)

(i) $\det(A)$ (iii) 0

(ii) 1 (iv) $\frac{1}{\det(A)}$

11. Let A be a nonsingular square matrix of order 3×3 . Then $|\text{adj } A|$ is equal to (1)

(i) $|A|$ (iii) $|A|^3$

(ii) $|A|^2$ (iv) $3|A|$

12. The slope of the normal to the curve $y=2x^2+3\sin x$ at $x=0$ is (2)

(i) 3 (iii) $\frac{1}{3}$

(ii) -3 (iv) $\frac{-1}{3}$

13. $\int x^2 e^{x^3} dx$ equals (1)

(i) $\frac{1}{3} e^{x^3} + c$ (iii) $\frac{1}{2} e^{x^3} + c$

(ii) $\frac{1}{3} e^{x^2} + c$ (iv) $\frac{1}{2} e^{x^2} + c$

14. Evaluate: $\int \sin 5x \sin 3x dx$. (2)

15. Evaluate: $\int e^x \cos x dx$. (1)

16. Find $\frac{dy}{dx}$, if $x=at^2$, $y=2at$. (1)

17. If $\sin\left(\sin^{-1}\frac{1}{5} + \cos^{-1}x\right) = 1$, then find the value of x. (1)

18. If R is an equivalence relation in $N \times N$ defined by $(a, b) R (c, d)$ if and only if $a+d=b+c$, show that R is an equivalence relation. (2)

19. In the interval $\frac{\pi}{2} < x < \pi$, find the value of x for which the matrix $\begin{bmatrix} 2 \sin x & 3 \\ 1 & 2 \sin x \end{bmatrix}$ is singular. (1)

20. Evaluate: $\int \frac{x^3}{\sqrt{1+x^2}} dx$ (2)

or

Evaluate: $\int_0^{\frac{\pi}{2}} \frac{\sin^4 x}{\sin^4 x + \cos^4 x} dx$.

21. Show that the relation R in the set $\{1, 2, 3\}$ given by $R = \{(1, 2), (2, 1)\}$ is symmetric but neither reflexive nor transitive. (1)

22. Let $f: R \rightarrow R$ be defined as $f(x) = x^2$. Choose the correct answer (1)

(iii) f is one-one onto (iii) f is many-one onto

(iv) f is one-one but not onto (iv) f is neither one-one nor onto

23. Write the smallest equivalence relation R on set $A = \{1, 2, 3\}$. (1)

24. Find the principal value of $\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)$. (1)

25. $\tan^{-1}\left(\frac{x}{y}\right) - \tan^{-1}\frac{x-y}{x+y}$ is equal to (2)

(iii) $\frac{\pi}{2}$

(iii) $\frac{\pi}{3}$

(iv) $\frac{\pi}{4}$

(iv) $\frac{-3\pi}{4}$

26. $A = [a_{ij}]_{m \times n}$ is a square matrix, if (1)

(iii) $m < n$

(iii) $m > n$

(iv) $m = n$

(iv) none of these

27. If $n = p$, then the order of the matrix $7X - 5Z$ is: (1)

(iii) $p \times 2$

(iii) $2 \times n$

(iv) $n \times 3$

(iv) $p \times n$

28. Construct a 2×2 matrix $A = [a_{ij}]$ whose elements are given by $a_{ij} = \frac{(i+2j)^2}{2}$. (1)

29. Find the minor of element 8 in matrix $A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$. (1)

30. If A is a square matrix of order 3 and $|2A| = k|A|$, then find the value of k . (1)

31. Find the value of k in order that points $(5, 5)$, $(k, 1)$ and $(10, 7)$ are collinear. (2)

32. If A is a square matrix of order 3 such that $|\text{adj } A| = 64$, then find $|A|$. (1)

33. The normal to the curve $x^2 = 4y$ passing $(1, 2)$ is (2)

(i) $x + y = 3$

(iii) $x - y = 3$

(ii) $x + y = 1$

(iv) $x - y = 1$

34. $\int_1^{\sqrt{3}} \frac{dx}{1+x^2}$ equals (2)

(iii) $\frac{\pi}{3}$

(iii) $\frac{2\pi}{3}$

(iv) $\frac{\pi}{6}$

(iv) $\frac{\pi}{12}$

35. $\int_0^{2/3} \frac{dx}{4+9x^2}$ equals (2)

(v) $\frac{\pi}{6}$

(iii) $\frac{\pi}{12}$

(vi) $\frac{\pi}{24}$

(iv) $\frac{\pi}{4}$

36. If A, B are symmetric matrices of same order, then $AB - BA$ is a (1)

(v) Skew symmetric matrix

(iii) Zero matrix

(vi) Symmetric matrix

(iv) Identity matrix

37. $\tan^{-1}\sqrt{3} - \cot^{-1}(-\sqrt{3})$ is equal to (1)

(v) π

(iii) $-\frac{\pi}{2}$

(vi) 0

(iv) $2\sqrt{3}$

38. If $\begin{bmatrix} x+y & 2 \\ 5+z & xy \end{bmatrix} = \begin{bmatrix} 6 & 2 \\ 5 & 8 \end{bmatrix}$, find the value of x, y and z . (2)

Half Yearly Examination
Class XII
Subject – Mathematics
SAMPLE PAPER

Time: 1:30 Hours

M.M:50

General instructions:

- All questions are compulsory.

39. Find $\frac{dy}{dx}$, if $y = 12(1 - \cos t)$, $x = 10(t - \sin t)$, $-\frac{\pi}{2} < t < \frac{\pi}{2}$.

40. Show that all the diagonal elements of a skew symmetric matrix are zero.

41. If R is an equivalence relation in $N \times N$ defined by $(a, b) R (c, d)$ if and only if $a+d=b+c$, show that R is an equivalence relation.

42. Prove that $2 \tan^{-1} \frac{1}{2} + \tan^{-1} \frac{1}{7} = \tan^{-1} \frac{31}{17}$.

43. The bookshop of a particular school has 10 dozen chemistry books, 8 dozen physics books, 10 dozen economics books. Their selling prices are Rs. 80, Rs. 60 and Rs. 40 each respectively. Find the total amount the bookshop will receive from selling all the books using matrix algebra.

44. Differentiate w.r.t. x: $(\log x)^x + (x)^{\log x}$.

45. Evaluate : $\int \frac{3x+5}{x^3-x^2-x+1} dx$.

Or

Find $\int_0^{\frac{\pi}{4}} \log(1 + \tan x) dx$.

46. Find the intervals in which the function f given by

$f(x) = \sin x + \cos x$, $0 \leq x \leq 2\pi$ is strictly increasing or decreasing.

Or

Find the equation of tangent to the curve given by

$$x = a \sin^3 t, \quad y = b \cos^3 t.$$

47. Show that the relation R in the set $A = \{1, 2, 3, 4, 5\}$, given by $R = \{(a, b) : |a - b| \text{ is even}\}$, is an equivalence relation.

48. For what value of x : $[1 \quad 2 \quad 1] \begin{bmatrix} 1 & 2 & 0 \\ 2 & 0 & 1 \\ 1 & 0 & 2 \end{bmatrix} \begin{bmatrix} 0 \\ 2 \\ x \end{bmatrix} = 0$?

49. A wire of length 28 m is to be cut into two pieces. One of the pieces is to be made into a square and the other into a circle. What should be the length of the two pieces so that the combined area of the square and the circle is minimum?

50. Find $\int \left[\log(\log x) + \frac{1}{(\log x)^2} \right] dx$.

51. Show that
$$\begin{vmatrix} (y+z)^2 & xy & zx \\ xy & (x+z)^2 & yz \\ xz & yz & (x+y)^2 \end{vmatrix} = 2xyz(x+y+z)^3.$$

.....

Sample Paper XII

Physical Education

1. Pre tournament tasks are done

(1 Point)

- during the tournament
- before the tournament
- After the tournament
- after the award ceremony

2. Which of the following is not a type of tournament?

(1 Point)

- Knockout tournament
- League tournament
- Ladder tournament
- Cash tournament

3. In this type of tournament, a team once gets defeated :

(1 Point)

- Combination tournament
- knockout tournament
- Ladder tournament
- League tournament

4. This type of tournament is a fast method to know about the winner team in the tournament

(1 Point)

- Knockout tournament
- League tournament
- Ladder tournament
- Combination tournament

5. Which of the following is the first step in a Sports programme?

(1 Point)

- Budgeting
- Planning
- Directing

- Staffing

6. What is the main work of finance committee in the tournament?

(1 Point)

- prepare budget of the tournament
- Registration of participants
- Publicity of the tournament
- Make transport arrangements

7. It is a detailed program made by the organisers before few days or on the same day of the competition

(1 Point)

- Fixture
- Seeding
- Bye
- Special seeding

8. sorting of the teams and fitting them in the fixtures so that the stronger teams do not meet each other in earlier rounds is called

(1 Point)

- Fixture
- Seeding
- Bye
- Special seeding

9. if there are large number of teams and the organisers want to complete the tournament early, which type of tournament is best:

(1 Point)

- Knockout tournament
- Ladder tournament
- Combination tournament
- League tournament

10. The energetic food consists of various types of essential Chemicals for our body termed as

(1 Point)

- Diet
- Carbs

- Energy
- Nutrients

11. deficiency of vitamin D causes

(1 Point)

- Beri Beri
- Scurve
- rickets
- night blindness

12. balanced diet is important for

(1 Point)

- Disease prevention
- Meeting nutritional needs
- Immune system
- All of the above

13. All over the world people engaging in hard physical work live mainly on

(1 Point)

- Carbohydrate rich diet
- Protein diet
- Fat free diet
- Fat packed diet

14. Too Rapid a weight loss due to dieting, fasting or excessive exercise may bring down level of your fat but it may also cause you to lose muscle

(1 Point)

- Strength
- Potential
- Mass
- Elasticity

15. If BMI is b/w 18.5 to 24.9, the person is in the :

(1 Point)

- Underweight category
- Normal weight category
- Overweight category
- Obese category

16.This vitamin is essential for good eyesight

(1 Point)

- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K

17. glucose is a type of

(1 Point)

- Complex carbohydrates
- proteins
- Fats
- simple carbohydrates

18.If BMI is between 25 to 29.9,then the person is in

(1 Point)

- Overweight category
- Underweight category
- Normal weight category
- Obese category

19.Symptoms such as coughing ,wheezing ,shortness of breath and /or chest tightness are caused in patients suffering from

(1 Point)

- Obesity
- Diabetes
- Hypertension
- Asthma

20. most of what we eat is broken down into

(1 Point)

- Amino acids
- nitrogen
- Glucose
- Carbon

21.Bhujangasana is also called as

(1 Point)

- Cobra pose
- Tiger pose
- Peacock pose
- Cow pose

22. In Hastottanasana, 'Hast' means:

(1 Point)

- Abdomen
- Arms
- chest
- Head

23. It resembles a dead body

(1 Point)

- Pawanmuktasana
- Matsyasana
- Paschimottanasana
- Shavasana

24. A neurological and developmental disorder that begins in childhood and lasts throughout a person's life:

(1 Point)

- ASD
- ODD
- OCD
- SPD

25. A condition in which the brain has trouble receiving and responding to information that comes in through the senses :

(1 Point)

- ASD
- ADHD
- ODD
- SPD

26. Children who are uncooperative, defiant and hostile towards peers, parents, teachers and other authority figures are generally suffering from

(1 Point)

- ASD
- ADHD
- ODD
- OCD

27. children having behavioral symptoms including hyperactivity ,impulsiveness and internet generally suffer from:

(1 Point)

- ADHD
- Mental retardation
- SPD
- ASD

28.Which of the following should not be a part of child's daily activity?

(1 Point)

- Running in the park
- Walking to a friend's home
- watching TV for long hours
- climbing on a frame

29.The medical name for this deformity is a genu varum

(1 Point)

- Scoliosis
- Lordosis
- Knock knees
- Bow legs

30. this post oral deformity is opposite to knock knee

(1 Point)

- Kyphosis
- Lordosis
- Flat back
- Bow legs

31. Harvard step test is used to measure

(1 Point)

- Aerobic fitness
- Back strength

- Dynamic balance
- Intellect

32. The Robot walking test was developed in

(1 Point)

- 1986
- 1984
- 1985
- 1983

33. Which one of the fibres percentage depend upon biological or heredity factor?

(1 Point)

- Fast twitch fibres
- Slow twitch fibres
- Both type of fibres
- None of them

34. which one of the following is not related to with spinal curvature deformities?

(1 Point)

- Kyphosis
- Lordosis
- Bow legs
- Scoliosis

35. In which Olympics did women participate for the first time?

(1 Point)

- 1896
- 1900
- 1904
- 1908

36. in which Olympic Games, Saina Nehwal and M.C Mary Kom secured won bronze medal each?

(1 Point)

- 2008 Olympics
- 2012 Olympics
- 2016 Olympics

none of the above

37. In which Olympics PT Usha secured 4th place in 400 metre hurdles race?

(1 Point)

1980 Olympics

1984 Olympics

1988 Olympics

1992 Olympics

38. white muscle fibre are better adapted to perform

(1 Point)

slow contraction

Fast contraction

Medium contraction

No contraction

39. The functional efficiency of a muscle depends upon its

(1 Point)

Nerve stimulation

Girth

fiber quality

Tonus

40. which one of the following is included in soft tissue injuries?

(1 Point)

Contusion

Strain

Abrasion

All of the above

41. which one of the following is not a soft tissue injury?

(1 Point)

Strain

Bruises

Laceration

Greenstick fracture

42. The Rockport walking test was developed in

(1 Point)

- 1986
- 1985
- 1964
- 1964

43. senior citizen fitness test was developed by

(1 Point)

- Dr. Harold M. Barrow
- Lucien brouha and his associateassociates
- Dr. Hans kraus and Dr. Sonja weber
- Dr. Roberta rikli and Dr. Jessie jones

44. which of the following term does not relate to 'test'?

(1 Point)

- Implement
- instrument
- Tool
- Technique

45. how does exercise affect size of muscle?

(1 Point)

- The muscle size decreases
- The muscle size increases
- no effect on muscle size
- the muscle stop growing

46.A part of the respiratory system also called as voice box is

(1 Point)

- Trachea
- Nasal cavity
- Pharynx
- Larynx

47. endurance athletes generally possesses high percentages of

(1 Point)

- fast twitch muscle fibres
- Slow twitch muscle fibres
- Fat

Flexibility

48. which of the following comes under the category of wound

(1 Point)

Abrasion

Lacerations

Both A and B

Tennis elbow

49. Fracture of a bone without breaking into pieces is called

(1 Point)

greenstick fracture

Impacted fracture

oblique fracture

compression fracture

50. breaking of a bone is called

(1 Point)

Fracture

Abrasion

location

Sprain

Subjective Paper

Time-1:30 hour. MM:50 General instructions : (i) All questions are compulsory. (ii) Questions nos. 1 to 10 carry 3 marks each. Answer to each question should not exceed 80-100 words (iii) Questions nos. 11 to 14 carry 5 marks each. Answer to each question should not exceed 150-200 words.

1.Explain about combination tournament with an example.

(3 Points)

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2.List the steps to form committees for tournaments.

(3 Points)

A rectangular text input box with a light gray border. It contains no text. On the right side, there are three small square buttons with upward, downward, and leftward arrows. On the bottom left, there are two small square buttons with leftward and rightward arrows.

3.Briefly explain any two food myths.

(3 Points)

A rectangular text input box with a light gray border. It contains no text. On the right side, there are three small square buttons with upward, downward, and leftward arrows. On the bottom left, there are two small square buttons with leftward and rightward arrows.

4.What do you mean by nutritive and non nutritive components of diet?

(3 Points)

A rectangular text input box with a light gray border. It contains no text. On the right side, there are three small square buttons with upward, downward, and leftward arrows. On the bottom left, there are two small square buttons with leftward and rightward arrows.

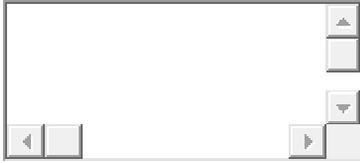
5.Explain about diabetes.

(3 Points)

A rectangular text input box with a light gray border. It contains no text. On the right side, there are three small square buttons with upward, downward, and leftward arrows. On the bottom left, there are two small square buttons with leftward and rightward arrows.

6.Discuss the procedure of book Rasna.

(3 Points)



7. Discuss the causes of ODD.

(3 Points)



8. What is abrasion? Discuss its management in brief.

(3 Points)



9. Discuss the concept of women's participation in sports in India.

(3 Points)



10. Discuss the back scratch test for upper body flexibility.

(3 Points)



11. Explain the eight foot up and go test for measuring agility.

(5 Points)



12. Enumerate any five effects of exercise on cardiorespiratory system.

(5 Points)



13. what do you mean by disability etiquettes? Mention any five general disability etiquettes.

(5 Points)



14. What do you mean by knockout tournament? Discuss the advantages and disadvantages of knockout tournament.

(5 Points)

ST. PBN PUBLIC SCHOOL, GURGAON
CLASS XII
SAMPLE PAPER
SUBJECT- ENGLISH
PART – A (OBJECTIVE)

TIME: 1.5 HRS

MM. 40

GENERAL INSTRUCTIONS:

1. ALL QUESTIONS ARE COMPULSORY.
2. READ ALL INSTRUCTIONS CAREFULLY.

Q1. Read the following passage carefully and tick the correct options: (10marks)

I have often thought it would be a blessing if each human being was stricken blind and deaf for a few days at some time during his adult life. Darkness would make him more appreciative of sight, silence would teach him the joy of sound. Now and then I have tested my seeing friends to discover what they see. Recently I asked a friend, who had just returned from a long walk in the woods, what she has observed. "Nothing in particular," she replied. How was it possible I asked myself to walk for an hour through the woods and see nothing worthy of note. I, who cannot see find hundreds of things to interest me through mere touch. I feel the delicate symmetry of leaf. I pass my hands lovingly about the smooth skin of a silver birch or the rough, shaggy bark of a pine. In spring I touch the branches of trees hopefully in search of a bud, the first sign of awakening nature after her winter's sleep. Occasionally if I am fortunate & place my hand gently on a small tree and feel the happy quiver of a bird in full song. At times my heart cries out with longing to see all these things. If I can get so much pleasure from mere touch, how much more beauty must be revealed by sight. And I have imagined what I should most like to see if I were given the use of my eyes, say, just for three days. I should divide the period into three parts. On the first day, I should want to see the people whose kindness and gentleness and companionship have made my life worth living. First I would like to gaze upon the face of my dear teacher, Mr. Anne Sullivan Macy. She came to see me when I was a child. She opened the other world for me.

Pick the correct option from the list options for each questions given below:

(1x10=10m)

(a) What would make one's blindness more appreciative of sight ?

- (i) Blackness
- (ii) Darkness
- (iii) Whiteness
- (iv) Joyfulness

(b) What would silence teach one's deafness ?

- (i) Joy of music
- (ii) Joy of voice
- (iii) Joy of sound
- (iv) Joy of speaking

(c) Where did her friend go ?

- (i) in a village
- (ii) in a city
- (iii) in a town
- (iv) in a wood

(d) How could Helen Keller find hundreds of things ?

- (i) by mere touch
- (ii) by voice
- (iii) by sound
- (iv) by listening

(e) Whom would she like to see first if she was given sight ?

- (i) Her father
- (ii) Her teacher
- (iii) Her brother
- (iv) Her mother

(f) Give the noun form of 'observe' ?

- (i) Observation
- (ii) Observasion
- (iii) Obserwation
- (iv) Obserwasion

(g) The plural form of 'leaf' is ?

- (i) Leafs
- (ii) Leaves
- (iii) Leafthen
- (iv) Leafen

(h) The verb form of 'thought' is ?

- (i) think
- (ii) thinked
- (iii) thinks
- (iv) to think

(i) The Narrator touches the branches of the tree to search for a

(i) Flower

(ii) stem

(iii) Root

(iv) bud

(j) Who opened the world for the Narrator?

(i) Ann Mary

(ii) Anne D'souza

(iii) Ann Sullivan Macy

(iv) Anne Silvesta

**Q2. Read the following passage carefully and tick the correct options that follow:
(10x1=10marks)**

1. Internet is built around the idea of openness. It allows people to connect and exchange information freely if the information or service is not illegal. Much of this is because of the idea of net neutrality.

2. When the internet started to take off in the 1980s and 1990s, there were no specific rules which stated that Internet Service Providers (ISPs) should follow the same principle. But mostly because telecom operators were also ISPs, they adhered to the same principle. This principle is known as net neutrality. An ISP does not control the traffic that passes its servers. When a web user connects to a website or web service, he or she gets the same speed. Data rate for YouTube Videos and Facebook photos is theoretically the same. Users can access any legal website or web service without any interference from an ISP.

3. Net neutrality has shaped the Internet in two fundamental ways. One, web users are free to connect to whatever website or service they want. ISPs do not bother with what kind of content is flowing through their servers. This has allowed the Internet to grow into a truly global network and has allowed people to freely express themselves. But more importantly, net neutrality has enabled a level playing field on the Internet. To start a website, you don't need a lot of money or connections. Just host your website and you are ready to go. If your service is good, it will find favor with web users. This has led to creation of Google, Facebook, Twitter and countless other services.

4. If there is no net neutrality, ISPs will have the power (and inclination) to shape the Internet traffic, so that they can derive extra benefit from it. For instance, several ISPs believe that they should be allowed to charge companies for services like YouTube and Netflix because these services consume more bandwidth compared to a normal website. Basically, these ISPs want a share in the money that YouTube or Netflix make.

5. Without net neutrality, the internet as we know will not exist. Instead of free access, there could be 'package plans' for consumers. For instance, if you pay Rs. 500, you will only be able to access websites based in India. To access international websites, you may have to pay more. Or maybe there can be different connection speed for different types of content, depending on how much you are paying for the service and what 'add-on-package' you have bought.

6. Lack of net neutrality will also spell doom for innovation on the web. It is possible that ISPs will charge web companies to enable faster access to their websites. Those who don't pay may see that their websites will open slowly. This means that bigger companies like Google will be able to pay more to make access to YouTube or Google + faster for web users, but a start-up that wants to create a different and better video hosting site may not be able to do that.

7. Legally, the concept of net neutrality doesn't exist in India. Sunil Abraham, the Executive Director of the Centre for Internet and Society in Bangalore, says that Telecom Regulatory Authority of India (TRAI), which regulates the telecom industry, has tried to come up with some rules regarding net neutrality several times. For instance, it invited comments on the concept of net neutrality from industry bodies and stakeholders in 2006. But no formal rules have been formed to uphold and enforce net neutrality.

8. However, despite lack of formal rules, ISPs in India mostly adhere to the principle of net neutrality. There have been some incidents where Indian ISPs have ignored net neutrality, but these are few and far between.

(i) Which of the following statements is true about ISPs?

1. They run according to specific rules and regulations
2. They are not responsible for controlling the jamming of the Internet
3. They interfere in the usage and accessibility of legal websites
4. They are responsible for monitoring the kind of content flowing through the Internet

(ii) Without net neutrality, how will one be able to access the Internet?

1. There will be no access to the Internet
2. One will have to travel miles to use the web
3. By opting for 'package plans' by ISPs to access the web
4. None of the above

(iii) What problem will the start-ups face in case there is lack of net neutrality?

1. They will have to pay more to the ISPs

2. They will face funding problems
3. They won't be able to prototype the idea of better and innovative websites
4. All of the above

(iv) What does the passage and the writer talk about?

1. The advantage of Internet to mankind
2. Importance of net neutrality and its enforcement as law
3. Evolution of start-ups
4. All of the above

(v) What are the "package plans" the author talks about in the passage?

1. travel package
2. insurance package
3. payment based Internet packages
4. all of the above

(vi) The concept of net neutrality

1. legally doesn't exist in India
2. Exists with formal rules from 2001
3. Is opposed in India
4. All of the above

(vii) fundamental means in the (para 2)

1. basic
2. base
3. superficial
4. secondary

(viii) an interested party or individual means in the (para 7)

1. non participant
2. stakeholder
3. spectator
4. observer

(ix) To start a website you need.....

1. need money
2. host website
3. connection
4. all of the above

(x) What is the full form of ISP?

1. Internet Security Protocol

2. Internet Survey Period
3. Internet Service Providers
4. Integrated Service Provider

Q3. Read the extract and Choose the correct option in the questions that follow: (4marks)

1. ‘..... After months of knowing him, I ask him his name.
He does not know what it means

1. Who is ‘I’
 - a. Amir Jung.
 - b. Jung Jung Bahadur
 - c. Anees Jung
 - d. Selma Lagerlof

2. Who is ‘him’?
 - a. Mukesh
 - b. Priest’s son
 - c. Saheb
 - d. Mukesh’s friend

3. What is the meaning of his name?
 - a. lord of the universe.
 - b. Emperor of the Universe
 - c. Lord of the Rings
 - d. prince of universe

4. What was Saheb’s aspiration?
 - a. To go to school.
 - b. to play tennis
 - c. to work in a tea stall
 - d. to work as domestic help

Q4. Choose the correct option in the questions that follow: (4marks)

“Mr Owl”, Roger Skunk said, “all the other little animals run away from me because I smell so bad”. “So you do,” the Owl said. “Very, very bad”. “What can I do?” Roger Skunk said, and he cried very hard.

1. What is Roger’s problem?
 - a) he is very naughty
 - b) he is very talkative

- c) he is very tall
- d) he has bad smell

2. Who is I in the above extract?

- a) Owl
- b) Wizard
- c) Roger
- d) None of the above

3. Who cried in the passage above?

- a) Wizard
- b) Roger
- c) Jo
- d) Owl

4. Who is the author of the lesson?

- a) William Shakespeare
- b) Jack Finney
- c) Anees Jung
- d) John Updike

Q5. Read the passage and tick the correct answers: (4marks)

..... On their slag heap, these children
Wear skins peeped through by bones and spectacles of steel
With mended glass, like bottle bits on stones.

(a) Who is the poet of the above extract

- 1. Stephen Spender
- 2. Pablo Neruda
- 3. Kamala Das
- 4. William Shakespeare

(b) 'slag heap' means

- 1. heap of wood
- 2. heap of paper
- 3. house waste
- 4. industrial waste

(c) What future awaits these children ?

- 1. a bright future
- 2. a bleak future
- 3. an excellent future

4. none of the above

(d) Name the figure of speech used in the third line

1. simile
2. metaphor
3. imagery
4. pun

Q6. Answer the following very shortly (any eight) 1x8=8 marks

1. Spite of despondence refers to-----
2. According to the poet a thing of beauty is-----
3. What can the earth teach us?
4. What is the theme of the poem "My Mother At Sixty Six"?
5. Why was the crofter so talkative and friendly with the peddler?
6. Name the pool where Douglas started learning swimming.
7. Why did Saheb and his family move to Delhi?
8. What order had come from Berlin?
9. Where did Sadao meet Hana?
10. How many pennies did Roger Skunk have?

ST. PBN PUBLIC SCHOOL, GURGAON
CLASS XII
SAMPLE PAPER
SUBJECT- ENGLISH
PART – B (SUBJECTIVE)

TIME: 1.5 HRS

MM. 40

GENERAL INSTRUCTIONS:

1. ALL QUESTIONS ARE COMPULSORY.
2. READ ALL INSTRUCTIONS CAREFULLY.

Q1. You are Vikram/Sonia, a graduate in history with specialization in Medieval India. You are well acquainted with places of historical interest in Delhi, Agra and Jaipur. You are looking for the job of a tourist guide. Write an advertisement in about 50 words for the Situations Wanted column of a local newspaper. Contact no. 9997510234. (3marks)

OR

The Literary Club of your school is putting up the play ‘The Merchant of Venice’. As the secretary of the club, draft a notice inviting the names of the participants. Insert all relevant details in about 50 words. You are Govinda/Gauri.

Q2. Mr. and Mrs. Kakkar want to invite all their friends and relatives to the wedding of their grandson Rahul. Design a card for the wedding inventing the necessary details within 50 words. (3marks)

OR

You are Mehul and have been invited to the post selection party of your friend Manoj/Manjula. Write a reply refusing the invitation you have got, invent necessary details in 50 words.

Q3. You are Naved/Nafeesa of 10, Nehru Nagar, Ahmedabad. The 60-foot wide main road in Nehru Nagar Market remains congested throughout the day because of massive encroachments on both sides of the road causing a lot of inconvenience to pedestrians, especially children and women. Write a letter to the editor of a national daily requesting him to highlight the problems faced by the residents, giving concrete suggestions for improving the situation. (5marks)

OR

Penguin publishers is looking for illustrators for its comic books. Gagan/ Garima Desai who has just completed MA in Fine Arts from Delhi University is interested in applying.

Write the application with complete Bio-Data and covering letter. Invent all necessary details.

Q4. You believe that a positive attitude is needed to ensure happiness, health and success. You are Krish/Karya. Write an article in 150–200 words on: “Advantages of a Positive Attitude”. (5marks)

OR

Recently you celebrated teacher’s day virtually. Write a report on the same to be published in the school magazine in about 120 – 150 words.

Q5. Answer any five of the following questions in about 30-40 words each: (2x5=10marks)

- Why did Hauser and the other villagers come to attend the last lesson?
- How did the near drowning experience at the pool affect Douglas?
- Why does the poetess look at ‘young trees ‘and‘ merry children’?
- What does Stephen Spender want for the children of the slums?
- Why did the Iron master speak kindly to the peddler and invite him home?
- How did the development of synthetic Indigo affect the English state owners.

Q6. Answer the following questions in about 30-40 words. (any 2) (2x2=4):

- Why was Roger Skunk’s mommy angry?
- What was Charley’s reaction after coming back from the third level?
- Why was Dr. Sadao not sent abroad with the troops?

Q7. Answer any one of the following questions in about 120-150 words: (5marks)

The bangle-makers of Firozabad make beautiful bangles and make everyone happy but they live and die in squalor. Explain.

OR

What horrific experiences did Douglas have in his childhood? What impact did they have on him?

Q8. Answer any one of the following in 120-150 words. (5marks)

Write a pen -portrait of Charley.

OR

Dr. Sadao’s character is amalgamation of right and wrong. Explain.

