



Part-II

Syllabus *with examples from Model Test Paper*

Syllabus

with examples

PAPER I : ENGLISH

Questions: 25

Marks: 25

The syllabus has been divided into two units namely:

- a) Grammar (15)
- b) Comprehension (10)

Unit a i.e. grammar will include the following areas:

- i. Punctuation (1)
- ii. Idioms and Phrases (2)
- iii. Determiners (1)
- iv. One Word Substitutes (2)
- v. Prepositions (2)
- vi. Modals (1)
- vii. Narration (1)
- viii. Voice (1)
- ix. Tenses (2)
- x. Translation and Re-translation (2)

Reading of a comprehension i.e. unit b trains students to grasp the meaning of the passage. The purpose of the comprehension exercises is to ensure that the given passage has been thoroughly understood. It tests not the understanding of the passage but also the ability of the students to express that they have grasped in their own words.

Two unseen simple passages will be set for this purpose. Ten questions in all will be set out of both the passages.

Note: The figure in the brackets indicate the number of item(s) to be set from the particular topic.

Some examples from Model Test paper is given below :

- I. Read the following passage carefully and choose the correct answer out of the four options given at the end of the each question:

"One of the people who strongly coloured my younger years was the Indian poet, Rabindranath Tagore (1861-1941), whose importance has recently undergone revolution. He ranks with Gandhi as one of the great heroes of India. He was a poet of world wide stature and the recipient of the Nobel Prize for literature. An opponent of colonialism, he planted much thought in the minds of the people of India. For these reasons he was widely praised during the eighty-one years of his life of creativity and struggle. One of the most impressive parts of his life in my view is the curse that seems to have fallen on his family after he devoted his own funds to the establishment of the Shantiniketan school for peace at Bolpur. One after another he lost his beloved wife, his second daughter and his youngest child. Accepting his own sorrow as a self-imposed trial, he moved courageously for the peace and happiness of all mankind. We remember him as "Gurudeva". Tagore did not actively participate in the freedom struggle. Yet he was one of its pioneers. With his versatility as a mystic, poet, play-writer, painter, story writer, he was unique indeed. William Butler Yeats recognized his genius and hailed him as a great mystic poet of the twentieth century. We are, of course proud of him.

1. The recipient of the Noble Prize for literature implies that he

- a) won a prize for his noble deeds
 - b) won an award for his honesty
 - c) won a prize for his patriotism
 - d) received noble prize for his contribution to literature
- Ans. (d)*

2. One of the following four statements about Rabindernath is **NOT TRUE**

- a) ranks with Gandhi Ji as a great hero
 - b) recipient of Nobel Prize
 - c) an opponent of colonialism
 - d) a freelance journalist
- Ans. (d)*

3. Who rated him as a "great mystic poet"?

- a) Gandhi Ji
 - b) William Butler Yeats
 - c) Jawahar Lal Nehru
 - d) Bankin Chandra Chatterjee
- Ans. (b)*

4. Find the opposite "cowardly" from the passage

- a) widely
 - b) strongly
 - c) courageously
 - d) creativity
- Ans. (c)*

5. **ढुगढे ङलढे गन ।**

- a) The fountains are going
 - b) The fountains are revolving
 - c) The fountains are moving
 - d) The fountains are playing
- Ans. (d)*

6. The police is looking into the murder
 a) ਪੁਲੀਸ ਕਤਲ ਨੂੰ ਦੇਖ ਰਹੀ ਹੈ ।
 b) ਪੁਲੀਸ ਕਤਲ ਦਾ ਪਿਛਾ ਕਰ ਰਹੀ ਹੈ ।
 c) ਪੁਲੀਸ ਕਤਲ ਦੀ ਛਾਣ ਬੀਣ ਕਰ ਰਹੀ ਹੈ ।
 d) ਪੁਲੀਸ ਕਤਲ ਨੂੰ ਨਜ਼ਰ ਅੰਦਾ ਕਰ ਰਹੀ ਹੈ ।

Ans. (c)

7. Which of the following is correctly spelt
 a) belive b) believe
 c) beleive d) beleve

Ans. (b)

8. Choose the correct present perfect tense out of the given options
 a) You missed this golden chance
 b) You are missing this golden chance
 c) You have missed this golden chance
 d) You shall miss this golden chance

Ans. (c)

iv) Preposition

9. He drinks neither coffee _____ tea
 a) either b) whether
 c) nor d) or

Ans. (c)

v) Conjunctions

10. There is _____ tea left in the cup
 a) a little b) much
 c) some d) few

Ans. (a)

vi) Determiners (including adjective)

11. Change the narration: The old woman said, "My son, I live for you".
 a) The old woman told that she had lived for him
 b) The old woman told her son that she lived for him
 c) The old woman told her son that she will live for him
 d) The old woman told her son that she lives for him

Ans. (b)

vii) Voice

12. Change the voice: They grow rice
 a) Rice is grown by them
 b) Rice was grown by them
 c) Rice had been grown
 d) Rice is being grown by them

Ans. (a)

viii) Narration

13. He worked hard so that he _____ pass
 a) may b) can
 c) might d) could

Ans. (d)

ix) Word Meaning

14. The word "rejected" means
 a) selected b) accepted
 c) refused d) achieved

Ans. (c)

PAPER II : APTITUDE

ਸੁਭਾਵਿਕ ਰੁਚੀ ਪਰਖ

Questions: 25

Marks: 25

A. Verbal Reasoning

- i) Completing a series
 - Number series (2)
 - Letter series (1)
 ii) Analog test (1)
 iii) Coding and decoding (1)
 iv) Arithmetical reasoning (4)
 v) Vocabulary test (2)
 vi) Venn (2)
 vii) Facts about Nation (2)

b) Non-verbal reasoning

- i) Odd one out (1)
 ii) Completion of series (2)
 iii) Analog test (1)
 iv) Completing an incomplete pattern (1)
 v) Spotting hidden pattern (1)
 vi) Identical or similar pattern (2)
 vii) Lateral inversion (1)
 viii) Folded and unfolded pattern (1)

ੳ) ਬਾਨੀ ਤਰਕੀਲਤਾ ਪਰਖ

- 1) ਕਿਸੇ ਲੜੀ ਨੂੰ ਪੂਰਾ ਕਰਨਾ (2)
 - ਅੰਕ ਲੜੀ (2)
 - ਵਰਣ ਲੜੀ (1)
 2) ਅਨੁਰੂਪਤਾ ਟੈਸਟ (1)
 3) ਸੰਕੇਤ ਭਾਗ ਲਿਖਣੀ ਤੇ ਸਮਝਣੀ (ਕੋਡਿੰਗ ਅਤੇ ਡੀਕੋਡਿੰਗ) (1)
 4) ਅੰਕ ਗਣਿਤ ਸਬੰਧੀ ਤਰਕੀਲਤਾ (4)
 5) ਬਦਾਵਲੀ ਸਬੰਧੀ ਜਾਣਕਾਰੀ ਟੈਸਟ (2)
 6) ਵੀਨ (2)
 7) Facts about Nation (2)

ਅ) ਗੈਰ ਬਾਨੀ ਤਰਕੀਲਤਾ ਪਰਖ

- 1) ਅਣਮਿਲਦਾ ਜਾਂ ਬਿਖਮ ਨੂੰ ਵੱਖ ਕਰਨਾ (1)
 2) ਲੜੀ ਨੂੰ ਪੂਰਾ ਕਰਨਾ (2)
 3) ਅਨੁਰੂਪਤਾ ਟੈਸਟ (1)
 4) ਅਪੂਰੇ ਪੈਟਰਨ ਨੂੰ ਪੂਰਾ ਕਰਨਾ (1)
 5) ਗੁਪਤ ਪੈਟਰਨ ਨੂੰ ਲੱਭਣਾ (1)
 6) ਸਮਰੂਪੀ ਜਾਂ ਇੱਕ ਜਿਹੇ ਪੈਟਰਨ (2)
 7) ਪਾਸੇ ਦਾ ਉਲਟਾਉ (1)
 8) ਲਪੇਟੇ ਅਤੇ ਅਣਲਪੇਟੇ ਪੈਟਰਨ (1)

Some examples from Model Test paper is given below :

1. Find the missing number in the following series out of the four options
96, 54, 20, ?

- a) 12
- b) 8
- c) 4
- d) 0

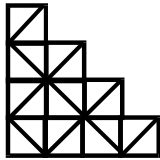
Ans. (d)

2. I have a few sweets to be distributed. If I keep 2, 3 or 4 in a pack, I am left with one sweet. If I keep 5 in a pack, I am left with none. What is the minimum number of sweets I can have to pack and distribute?

- a) 54
- b) 25
- c) 65
- d) 37

Ans. (b)

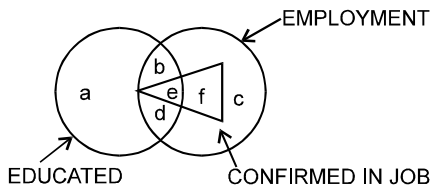
3. Find the number of squares in the following figure.



- a) 14
- b) 13
- c) 12
- d) 11

Ans. (a)

4. Read the figure and find the regions representing persons who are educated and employed but not confirmed

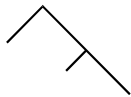


- a) a, b, c
- b) a, c
- c) b, d
- d) a, d, c

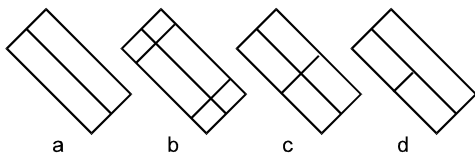
Ans. (c)

5. Four alternate figures are given. Out of these alternate figures, one figure is such that the problem figure is hidden into it. Choose the problem figure among the alternative figures.

Question Figure:



Alternative Figures:



- a) a
- b) b
- c) c
- d) d

Ans. (d)

1. ਹੇਠਾਂ ਦਿੱਤੀ ਗਈ ਲੜੀ ਦੇ ਵਿੱਚ ਅਗਲਾ ਅੰਕ ਚਾਰ ਵਿਕਲਪਾਂ ਵਿੱਚੋਂ ਕਿਹੜਾ ਹੋਵੇਗਾ।

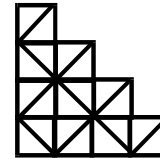
96, 54, 20, ?

- a) 12
- b) 8
- c) 4
- d) 0

2. ਮੇਰੇ ਕੋਲ ਵੰਡਣ ਲਈ ਕੁਝ ਮਿਠਾਈਆਂ ਹਨ। ਜੇਕਰ ਮੈਂ 2,3 ਜਾਂ ਚਾਰ ਪੈਕ ਵਿੱਚ ਰੱਖ ਲਵਾਂ - ਮੇਰੇ ਕੋਲ ਇੱਕ ਮਿਠਾਈ ਰਹਿ ਜਾਵੇਗੀ। ਜੇਕਰ ਮੈਂ 5 ਪੈਕ ਵਿੱਚ ਰੱਖ ਲਵਾਂ ਮੇਰੇ ਕੋਲ ਕੁਝ ਨਹੀਂ ਬਚੇਗਾ। ਮੈਂ ਕਿੰਨੀਆਂ ਘੱਟ ਤੋਂ ਘੱਟ ਮਿਠਾਈਆਂ ਵੰਡਣ ਲਈ ਪੈਕ ਵਿੱਚ ਰੱਖ ਸਕਾਂਗੀ।

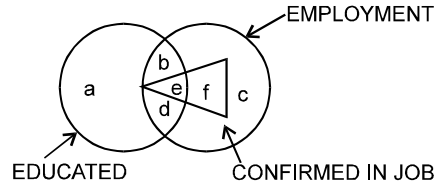
- a) 54
- b) 25
- c) 65
- d) 37

3. ਹੇਠਾਂ ਦਿੱਤੇ ਚਿੱਤਰ ਵਿੱਚ ਵਰਗਾਂ ਦੀ ਸੰਖਿਆ ਪਤਾ ਕਰੋ।



- a) 14
- b) 13
- c) 12
- d) 11

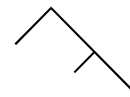
4. ਚਿੱਤਰ ਨੂੰ ਪੜ੍ਹੋ ਅਤੇ ਉਹਨਾ ਖੇਤਰਾਂ ਦਾ ਪਤਾ ਲਗਾਓ ਜਿੱਥੇ ਪੜ੍ਹੇ ਲਿਖੇ ਲੋਕ ਹਨ ਅਤੇ ਕੰਮ ਵਿੱਚ ਲੱਗੇ ਹੋਏ ਹਨ ਪਰੰਤੂ ਪਕੇ ਨਹੀਂ ਹਨ।



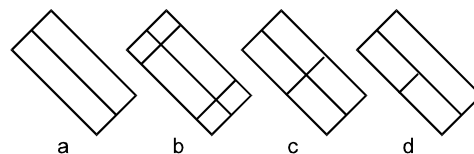
- a) a, b, c
- b) a, c
- c) b, d
- d) a, d, c

5. ਚਾਰ ਵਿਕਲਪ ਚਿੱਤਰ ਦਿੱਤੇ ਹਨ। ਦਿੱਤੇ ਹੋਏ ਚਿੱਤਰਾਂ ਵਿੱਚ ਇੱਕ ਚਿੱਤਰ ਵਿੱਚ ਪ੍ਰ ਨ ਚਿੱਤਰ ਛਿਪਿਆ ਹੈ ਸਾਰੇ ਵਿਕਲਪ ਚਿੱਤਰਾਂ ਵਿੱਚੋਂ ਪ੍ਰ ਨ ਚਿੱਤਰ ਲੱਭੋ।

Question Figure:



Alternative Figures:



- a) a
- b) b
- c) c
- d) d

PAPER III : MATHEMATICS
ਗਣਿਤ

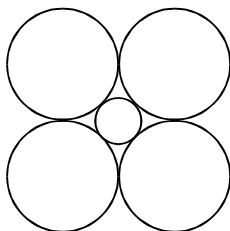
Questions: 50

Marks: 50

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Algebra <ol style="list-style-type: none"> i) Linear Equations in Two Variables (2) ii) Polynomials And Rational Expressions (3) iii) Quadratic Equations (3) 2. Commercial Mathematics (4) 3. Arithmetic Progressions (5) 4. Co-Ordinate Geometry (5) 5. Trigonometry (5) 6. Mensuration of Plane Figures (5) 7. Statistics (4) 8. Geometry – <ol style="list-style-type: none"> i) Similar Triangles (5) ii) Circle (5) 9. Ratio And Proportion (4) | <ol style="list-style-type: none"> 1. ਬੀਜ ਗਣਿਤ (ਅਲਜਬਰਾ) <ol style="list-style-type: none"> i) ਰੇਖਿਕ ਸਮੀਕਰਣਾਂ ii) ਬਹੁਪਦ ਅਤੇ ਪਰਿਮੇਯ ਵਿਅੰਜਕ iii) ਦੋਘਾਤੀ ਸਮੀਕਰਣ 2. ਵਪਾਰਿਕ ਗਣਿਤ (ਕਮਰੀਅਲ ਮੈਥ) 3. ਅੰਕਗਣਿਤਿਕ ਲੜੀਆਂ 4. ਨਿਰਦੇਸ਼ ਅਤੇ ਜਿਮਾਇਤੀ 5. ਤਿਕੋਣ ਮਿਤੀ 6. ਚਿੱਤਰਾਂ ਦੀ ਖੇਤਰਮਿਤੀ 7. ਅੰਕੜਾ ਵਿਗਿਆਨ 8. ਰੇਖਾ ਗਣਿਤ (ਜਿਊਮੈਟਰੀ) <ol style="list-style-type: none"> i) ਸਮਰੂਪ ਤਿਭੁਜ: ii) ਚੱਕਰ 9. ਅਨੁਪਾਤ ਅਤੇ ਸਮਾਨ-ਅਨੁਪਾਤ |
|---|--|

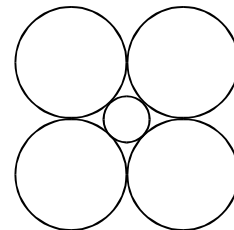
Some examples from Model Test paper is given below :

- | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------------|--------|------|------|------------------|------------------|------------------|------------------|----------------------|---------------------------|----------------------|--------------------------|--|--------|--------|------|------|------------------|------------------|------------------|------------------|----------------------|---------------------------|----------------------|--------------------------|
| <ol style="list-style-type: none"> 1. The value of k for which system of simultaneous linear equation $x - 2y = 5$; $ky - 3x = -15$ has infinitely many solutions <table border="0" style="width: 100%;"> <tr> <td>a) - 6</td> <td>b) - 4</td> </tr> <tr> <td>c) 2</td> <td>d) 6</td> </tr> </table> <p style="text-align: right;"><i>Ans. (d)</i></p> 2. The GCD of two polynomials is $(x+3)$ and their LCM is $x^3 - 7x + 6$. If one of the polynomials is $x^2 + 2x - 3$, then the other polynomial is <table border="0" style="width: 100%;"> <tr> <td>a) $x^2 - x + 6$</td> <td>b) $x^2 + x - 6$</td> </tr> <tr> <td>c) $x^2 + x + 6$</td> <td>d) $x^2 - x - 6$</td> </tr> </table> <p style="text-align: right;"><i>Ans (b)</i></p> 3. $(\log x)^2 - (\log y)^2$ is equal to <table border="0" style="width: 100%;"> <tr> <td>a) $\log (xy) (x/y)$</td> <td>b) $\log (x+y)\log (x-y)$</td> </tr> <tr> <td>c) $\log (x+y)(x-y)$</td> <td>d) $2 \log x - 2 \log y$</td> </tr> </table> <p style="text-align: right;"><i>Ans. (a)</i></p> 4. In the following figure, find the radius of the inner circle, if the other circles are of radius a | a) - 6 | b) - 4 | c) 2 | d) 6 | a) $x^2 - x + 6$ | b) $x^2 + x - 6$ | c) $x^2 + x + 6$ | d) $x^2 - x - 6$ | a) $\log (xy) (x/y)$ | b) $\log (x+y)\log (x-y)$ | c) $\log (x+y)(x-y)$ | d) $2 \log x - 2 \log y$ | <ol style="list-style-type: none"> 1. 'k' ਦਾ ਮਾਨ ਜਿਸ ਲਈ ਸਮੀਕਰਣ ਦੀ ਪ੍ਰਣਾਲੀ $x-2y=5$, $ky-3x=-15$ ਦੇ ਅਨੰਤ ਹੱਲ ਹੈ। <table border="0" style="width: 100%;"> <tr> <td>a) - 6</td> <td>b) - 4</td> </tr> <tr> <td>c) 2</td> <td>d) 6</td> </tr> </table> 2. ਦੋ ਬਹੁਪਦਾਂ ਦਾ GCD ਹੈ $x+3$ ਅਤੇ ਉਹਨਾਂ ਦਾ LCM ਹੈ x^3+7x+6 ਜੇਕਰ ਇੱਕ ਬਹੁਪਦ ਹੈ x^2+2x-3 ਤੇ ਅਗਲਾ ਬਹੁਪਦ ਹੈ- <table border="0" style="width: 100%;"> <tr> <td>a) $x^2 - x + 6$</td> <td>b) $x^2 + x - 6$</td> </tr> <tr> <td>c) $x^2 + x + 6$</td> <td>d) $x^2 - x - 6$</td> </tr> </table> 3. $(\log x)^2 - (\log y)^2$ ਬਰਾਬਰ ਹੈ <table border="0" style="width: 100%;"> <tr> <td>a) $\log (xy) (x/y)$</td> <td>b) $\log (x+y)\log (x-y)$</td> </tr> <tr> <td>c) $\log (x+y)(x-y)$</td> <td>d) $2 \log x - 2 \log y$</td> </tr> </table> 4. ਹੇਠਾਂ ਦਿੱਤੇ ਚਿੱਤਰ ਵਿੱਚ ਅੰਦਰਲੇ ਚੱਕਰ ਦਾ ਅਰਧ ਵਿਆਸ ਪਤਾ ਕਰੋ ਜੇਕਰ (ਬਾਹਰਲੇ) ਦੂਜੇ ਚੱਕਰ ਦਾ ਅਰਧਵਿਆਸ ਹੈ 'a' | a) - 6 | b) - 4 | c) 2 | d) 6 | a) $x^2 - x + 6$ | b) $x^2 + x - 6$ | c) $x^2 + x + 6$ | d) $x^2 - x - 6$ | a) $\log (xy) (x/y)$ | b) $\log (x+y)\log (x-y)$ | c) $\log (x+y)(x-y)$ | d) $2 \log x - 2 \log y$ |
| a) - 6 | b) - 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| c) 2 | d) 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| a) $x^2 - x + 6$ | b) $x^2 + x - 6$ | | | | | | | | | | | | | | | | | | | | | | | | |
| c) $x^2 + x + 6$ | d) $x^2 - x - 6$ | | | | | | | | | | | | | | | | | | | | | | | | |
| a) $\log (xy) (x/y)$ | b) $\log (x+y)\log (x-y)$ | | | | | | | | | | | | | | | | | | | | | | | | |
| c) $\log (x+y)(x-y)$ | d) $2 \log x - 2 \log y$ | | | | | | | | | | | | | | | | | | | | | | | | |
| a) - 6 | b) - 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| c) 2 | d) 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| a) $x^2 - x + 6$ | b) $x^2 + x - 6$ | | | | | | | | | | | | | | | | | | | | | | | | |
| c) $x^2 + x + 6$ | d) $x^2 - x - 6$ | | | | | | | | | | | | | | | | | | | | | | | | |
| a) $\log (xy) (x/y)$ | b) $\log (x+y)\log (x-y)$ | | | | | | | | | | | | | | | | | | | | | | | | |
| c) $\log (x+y)(x-y)$ | d) $2 \log x - 2 \log y$ | | | | | | | | | | | | | | | | | | | | | | | | |



- | | |
|-----------------------|------------------------|
| a) $(\sqrt{2} - 1) a$ | b) $2(\sqrt{2} - 1) a$ |
| c) $1 / \sqrt{2} a$ | d) $\sqrt{2} a$ |

Ans. (a)



- | | |
|-----------------------|------------------------|
| a) $(\sqrt{2} - 1) a$ | b) $2(\sqrt{2} - 1) a$ |
| c) $1 / \sqrt{2} a$ | d) $\sqrt{2} a$ |

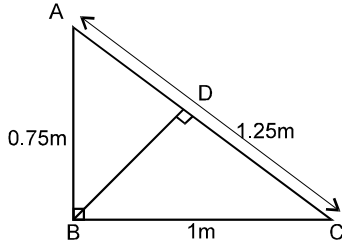
5. The value of $\sin 80^\circ / \cos 10^\circ + \sin 59^\circ \sec 31^\circ$ is
 a) -1 b) 0
 c) 1 d) 2

Ans. (d)

6. Area under the frequency polygon is equal to
 a) 0.5 b) 1
 c) half of the total frequency
 d) total frequency

Ans. (d)

7. In the given figure, the length BD =



- a) 0.6 m b) 1.25 m
 c) 1.6 m d) 1.75 m

Ans. (a)

8. If CP = Rs. 700/-, Profit = 15%, then SP =
 a) Rs. 750/- b) Rs. 800/-
 c) Rs. 805/- d) Rs. 850/-

Ans. (c)

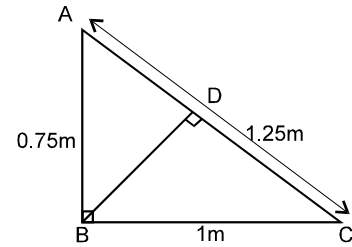
9. A man purchases a cycle for Rs. 1760. If the sale tax is 10%, the list price of the cycle is
 a) 1584 b) 1600
 c) 1670 d) 1936

Ans. (b)

5. $\sin 80^\circ / \cos 10^\circ + \sin 59^\circ \sec 31^\circ$ ਦਾ ਮਾਨ ਹੈ
 a) -1 b) 0
 c) 1 d) 2

6. ਬਾਰੰਬਾਰਤਾ ਬਹੁਭੁਜ ਦੇ ਅੰਦਰ ਦਾ ਖੇਤਰਫਲ ਬਰਾਬਰ ਹੈ
 a) 0.5 b) 1
 c) ਕੁੱਲ ਬਾਰੰਬਾਰਤਾ ਦਾ ਅੱਧ
 d) ਕੁੱਲ ਬਾਰੰਬਾਰਤਾ

7. ਦਿੱਤੇ ਗਏ ਚਿੱਤਰ ਵਿੱਚ BD ਦੀ ਲੰਬਾਈ ਹੈ



- a) 0.6 m b) 1.25 m
 c) 1.6 m d) 1.75 m

8. ਜੇਕਰ CP=Rs.700/-, ਲਾਭ =15% ਤਾਂ SP=
 a) Rs. 750/- b) Rs. 800/-
 c) Rs. 805/- d) Rs. 850/-

9. ਇੱਕ ਆਦਮੀ 1760/- ਰੁਪਏ ਦਾ ਸਾਈਕਲ ਖਰੀਦਦਾ ਹੈ ਜੇਕਰ ਵਿਕਰੀ ਕਰ ਦਰ 10% ਹੈ ਤਾਂ ਸਾਈਕਲ ਦਾ ਸੂਚੀ ਮੁਲ ਹੈ
 a) 1584 b) 1600
 c) 1670 d) 1936

PAPER IV: PHYSICS
ਭੌਤਿਕ ਵਿਗਿਆਨ(ਫਿ ਫਿ ਕਸ)

Questions: 50

Marks: 50

- | | | |
|--|-----|--|
| 1. The Universe | (3) | 1. ਬ੍ਰਹਿਮੰਡ |
| 2. Nuclear Fission and Fusion | (3) | 2. ਨਿਊਕਲੀਅਰ ਵਿਖੰਡਨ ਅਤੇ ਸੰਯੋਜਨ |
| 3. Electricity, its Heating and Chemical Effects | (5) | 3. ਬਿਜਲੀ, ਇਸਦੇ ਤਾਪਨ ਅਤੇ ਰਸਾਇਣਕ ਪ੍ਰਭਾਵ |
| 4. Source of Energy | (3) | 4. ਊਰਜਾ ਦੇ ਸੋਮੇ |
| 5. Refraction of Light | (3) | 5. ਪ੍ਰਕਾਸ਼ ਦਾ ਅਪਵਰਤਨ |
| 6. Reflection of Light | (3) | 6. ਪ੍ਰਕਾਸ਼ ਦਾ ਪਰਾਵਰਤਨ |
| 7. Optical Instruments | (4) | 7. ਪ੍ਰਕਾਸ਼ੀ ਯੰਤਰ (Optical Instruments) |
| 8. Magnetic Effects of Electric Current | (4) | 8. ਬਿਜਲੀ ਦੇ ਚੁੰਬਕੀ ਪ੍ਰਭਾਵ |
| 9. Motion | (3) | 9. ਗਤੀ(ਮੋ ਨ) |
| 10. Force | (4) | 10. ਬਲ(ਫੋਰਸ) |
| 11. Gravitation | (3) | 11. ਗੁਰੂਤਾਕਰਣ(ਗ੍ਰੇਵੀਟੇ ਨ) |
| 12. Work, Power and energy | (4) | 12. ਕਾਰਜ, ਬਲ ਅਤੇ ਊਰਜਾ |
| 13. Heat | (5) | 13. ਤਾਪ |
| 14. Wave Motion and Sound | (3) | 14. ਤਰੰਗ ਗਤੀ ਅਤੇ ਧੁਨੀ |

PAPER V : CHEMISTRY
ਰਸਾਇਣ ਵਿਗਿਆਨ(ਕੈਮਿਸਟਰੀ)

Questions: 50

Marks: 50

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|---|------|--|
| 1. Rate of Chemical Reaction and Chemical Equilibrium | (11) | 1. ਰਸਾਇਣਕ ਕਿਰਿਆਵਾਂ ਦੀ ਦਰ ਅਤੇ ਰਸਾਇਣਕ ਸੰਤੁਲਨ |
| 2. Important Chemical Compounds | (11) | 2. ਮਹੱਤਵਪੂਰਨ ਰਸਾਇਣਕ ਯੋਗਿਕ |
| 3. Metals and Non-Metals | (11) | 3. ਧਾਤਾਂ ਅਤੇ ਅਧਾਤਾਂ |
| 4. Carbon Compounds | (11) | 4. ਕਾਰਬਨ ਯੋਗਿਕ (ਕਾਰਬਨ ਕੰਪਾਉਂਡ) |
| 5. Environment | (6) | 5. ਵਾਤਾਵਰਣ(ਐਨਵਾਇਰਨਮੈਂਟ) |

Some examples from Model Test paper is given below :

- | | | |
|---|----------|--|
| 1. The number of neutrons present in $^{23}_{11}\text{Na}$ is a) 11 b) 12 c) 23 d) 34 | Ans. (b) | 1. $^{23}_{11}\text{Na}$ ਵਿੱਚ ਕਿੰਨੇ ਨਿਊਟ੍ਰਾਨ ਪਾਏ ਜਾਂਦੇ ਹਨ- a) 11 b) 12 c) 23 d) 34 |
| 2. A metal bicarbonate has the formula, MHCO_3 . The formula of its phosphate is a) MPO_4 b) M_3PO_4 c) M_3PO_3 d) $\text{M}_2(\text{PO}_4)_3$ | Ans. (b) | 2. ਇੱਕ ਧਾਤ ਬਾਈ ਕਾਰਬੋਨੇਟ ਦਾ ਸੂਤਰ MHCO_3 ਹੈ ਇਸ ਦੇ ਫੋਸਫੇਟ ਦਾ ਸੂਤਰ ਹੈ- a) MPO_4 b) M_3PO_4 c) M_3PO_3 d) $\text{M}_2(\text{PO}_4)_3$ |
| 3. To which category does the following reaction belong: $\text{NH}_4\text{CNO} \xrightarrow{\text{heat}} \text{NH}_2\text{CONH}_2$ a) Combination reaction b) Decomposition reaction c) Displacement reaction d) Isomerisation reaction | Ans. (d) | 3. ਹੇਠ ਲਿਖੀ ਪ੍ਰਤੀਕਿਰਿਆ ਕਿਹੜੇ ਵਰਗ ਨਾਲ ਸਬੰਧਤ ਹੈ - $\text{NH}_4\text{CNO} \xrightarrow{\text{heat}} \text{NH}_2\text{CONH}_2$ a) ਯੋਗਿਕ ਪ੍ਰਤੀਕਿਰਿਆਵਾਂ b) ਅਪਘਟਨ ਪ੍ਰਤੀਕਿਰਿਆਵਾਂ c) ਵਿਸਥਾਪਨ ਪ੍ਰਤੀਕਿਰਿਆਵਾਂ d) ਸਮਅੰਗੀ ਪ੍ਰਤੀਕਿਰਿਆਵਾਂ |
| 4. Which of the following sets of elements do not belong to the same group? a) F, Cl, Br b) Na, K, Rb c) P, S, Cl d) C, S, Ge | Ans. (c) | 4. ਇਹਨਾਂ ਵਿੱਚੋਂ ਕਿਹੜੇ ਤੱਤਾਂ ਦੇ ਗੁੱਟ ਇੱਕੋ ਜਿਹੇ ਸਮੂਹ ਨਾਲ ਸਬੰਧ ਨਹੀਂ ਰੱਖਦੇ- a) F, Cl, Br b) Na, K, Rb c) P, S, Cl d) C, S, Ge |
| 24. The IUPAC name of the compound given in the box is $\begin{array}{c} \text{CH}_3 - \text{C} \equiv \text{C} - \text{CH} - \text{CH}_3 \\ \\ \text{C}_2\text{H}_5 \end{array}$ | Ans. (a) | 24) ਡੱਬੇ ਵਿੱਚ ਦਿੱਤੇ ਗਏ ਯੋਗਿਕ ਦਾ IUPAC ਨਾਂ ਹੈ: $\begin{array}{c} \text{CH}_3 - \text{C} \equiv \text{C} - \text{CH} - \text{CH}_3 \\ \\ \text{C}_2\text{H}_5 \end{array}$ |
| a) 4 - methyl - hexa - 2 - yne b) 4 - ethyl - penta - 2 - yne c) 3 - methyl - hex - 4 - yne d) 2 - ethyl - penta - 3 - yne | | a) 4-ਮੀਥਾਈਲ-ਹੇਕਸਾ-2-ਆਈਨ b) 4-ਈਥਾਈਲ-ਪੈਂਟਾ-2-ਆਈਨ c) 3-ਮੀਥਾਈਲ-ਹੇਕਸਾ-4-ਆਈਨ d) 2-ਈਥਾਈਲ-ਪੈਂਟਾ-3-ਆਈਨ |
| 5. The cores of lead pencils are formed of a) carbon black b) lead metal c) graphite d) diamond | Ans. (c) | 5. ਪੈਨਸਿਲ ਦਾ ਸਿੱਕਾ ਨਾਲ ਤਿਆਰ ਕੀਤਾ ਜਾਂਦਾ ਹੈ a) ਕਾਲਾ ਕਾਰਬਨ b) ਲੈਡ ਧਾਤ c) ਗ੍ਰੈਫਾਈਟ d) ਹੀਰਾ |
| 6. The general formula of alkynes is a) C_nH_{2n} a) $\text{C}_n\text{H}_{2n+2}$ b) $\text{C}_n\text{H}_{2n-2}$ b) $\text{C}_n\text{H}_{2n-2}$ c) $\text{C}_n\text{H}_{2n+1}$ c) $\text{C}_n\text{H}_{2n+1}$ | Ans. (c) | 6. ਐਲਕਾਈਨ ਦਾ ਸਾਧਾਰਣ ਸੂਤਰ ਹੈ- a) C_nH_{2n} a) $\text{C}_n\text{H}_{2n+2}$ b) $\text{C}_n\text{H}_{2n-2}$ b) $\text{C}_n\text{H}_{2n-2}$ c) $\text{C}_n\text{H}_{2n+1}$ c) $\text{C}_n\text{H}_{2n+1}$ |