STATE OLYMPIAD COMBINED TEST-2024

ENGLISH VERSION

Question Paper Cum Answer Sheet

CLASS 10

Full Marks:-

100 Marks

Time:-

2 Hrs.

State Olympiad

DATE:-………/………/ 2024

Name of Student:-...

Class:- ....   **Roll No:-**. ....

Name of Centre:-...

-:Instructions:-

- Write Roll Number clearly.
- Read the question paper carefully and answer.
- Give single (√) mark on the correct answer only.
- Use only blue or black ball pen.

Subject	Marks Obtained
English	
Gen. Science	
Mathematics	
TOTAL	

_____
Signature of Student

_____
Signature of Examiner/s

_____
Signature of Invigilator/s

ENGLISH-40
(Grammar-20)

1. Tick the correct option to complete the following sentences: 1×8=8

i) **'In spite of my presence, he was making jokes.'** The underlined part of the sentence is a/an

    a) Participle Adjective [ ]   b) Nominative absolute [ ]

    c) Adverb of Manner [ ]   d) Prepositional Phrase [ ]

ii) **'She is irregular, isn't she?'** The sentence is an example of

    a) WH – Question [ ]   b) Yes – No Question [ ]

    c) Tag Question [ ]   d) None of These [ ]

iii) **'Aditya has been _____ at my Office.'**

    a) called in [ ]   b) called on [ ]   c) called for [ ]   d) called up [ ]

iv) **'Manashi is very sincere _____ her studies.'**

    a) at [ ]   b) to [ ]   c) by [ ]   d) in [ ]

v) **If the ozone layer collapses, the global community will suffer.'** The underlined part is –

    a) Adverb clause of Reason [ ]   b) Adverb clause of Condition [ ]

    c) Adverb clause of Time [ ]   d) Adverb clause of Purpose [ ]

vi) **'Her _____ speech encourages us a lot.'**

    a) inspiring [ ]   b) sweet [ ]   c) soothing [ ]   d) cunning [ ]

vii) One word expression for the phrase **'The person who worships God'** is

    a) Priest [ ]   b) Seamstress [ ]   c) Artiste [ ]   d) None of These [ ]

viii) **'You _____ have done this urgent work at that moment.'**

    a) should [ ]   b) can [ ]   c) could [ ]   d) may [ ]

2. Fill in the blanks with the correct answer : 1×4=4

i) **An example of prepositional phrase** is _____ .

ii) **'They are coming today in time'** is in _____ tense.

iii) **'He is one of the best…'** The **expression** is the beginning of _____degree.

iv) The **positive form** of the sentence **'None but a hard worker succeeds.'** will be

    _____ .

3. Answer the following questions each in a complete sentence: **2×4=8**

i) Turn the following **simple** sentence **into a complex** one:

     'Ramu is too poor to buy a bicycle.'

Ans._____

ii) Correct the **grammatical error** in the following sentence:

    'The Magistrate and Collector were present there.'

Ans._____

iii) Change the voice:

    'The gate is beeing locked by the guard'.

Ans._____

 iv) Change the following into Direct Speech:

  ' **She told me that she had been taking the breakfast thatday in the morning.'**

Ans._____

(Comrehension-10)

4. Read the following passage and answer the questions that follow:

In recent decades, cities have grown so large that now about 50% of the Earth's population lives in urban areas. There are several reasons for this occurrence. First, the increasing industrialization of the nineteenth century resulted in the creation of many factory jobs, which tended to be located in cities. These jobs, with their promise of a better material life, attracted many people from rural areas. Second, there were many schools established to educate the children of the new factory labourers. The promise of a better education persuaded many families to leave farming communities and move to the cities. Finally, as the cities grew, people established places of leisure, entertainment, and culture, such as sports stadiums, theatres, and museums. For many people, these facilities made city life appear more interesting than life on the farm, and therefore drew them away from rural communities.

I) Fill in the following chart with the information from the above text: **2×2=4**

CAUSE	EFFECT
Now about 50% of the Earth's population lives in urban areas.	
	The facilities made in city life appear more interesting than life on the farming, and therefore drew them away from rural communities.

II) Find the words in the passage above that mean the following. Write them in the space given beside: **2×2=4**

 a) Metropolitan   -   ┌─────────────────────────┐
                                 └─────────────────────────┘

b) Set up   –

III) Answer the following question in about 20 words: **1× 2=2**

 IV) Why city life appears more interesting than life on the farming?

 Ans._____

   _____

(Writing & Spoken Expression-10)

5.A) Tick the correct option to complete the following sentences: **1×4=4**

i) **'The teacher said, "What a brilliant student he is!".' exclaims**

    a)Cheerful [ ]   b) Happy [ ]   c) Praise [ ]   d) Wonder [ ]

ii) **"Hurrah! I passed the Exam." – It is an expression of**

    a) Pleasure [ ]   b) Apology [ ]   c) Happiness [ ]   d) Joy [ ]

iii) **"Could you please call a Taxi for me ?"** suggests-

    a) Enquiring [ ]   b) Advice [ ]   c) Request [ ]   d) None of These [ ]

iv) **"We must be careful while driving any vehicle ."** Means

    a) Suggestion [ ]   b) Confident [ ]   c)Advice [ ]   d) Proposal [ ]

6.B) Answer the following questions: **2×3=6**

 i) What will be your **beginning lines in an Editorial Letter** ?

Ans:- _____

_____

_____

ii) Suppose, you want **permission to go to an excursion** but your mother tells sorry. How will you convince her ?

Ans:- _____

_____.

iii) **'Wish you a Happy Journey!'** What does the spoken expression meen ?

Ans:- _____.

_____

GENERAL SCIENCE-20

A) Select the correct answer to the following questions :-   **1x5=5**

i) Normal amount of Nitrogen in air is -

    a) 0.03%   b) 1.04%   c) 20.60%   d) 77.16

ii) The main greenhouse gas is

    a) O_2 b) 0_3 c) CO_2 d) CFC

iii) Bioaugmentation is associated with –

    a) Phosphate   b) Detergent   c) DDT   d) CFC

iv) Susking effect is related to the following zones?

    a) Noise pollution   b) Water pollution   c) Soil pollution   d) Air pollutio

v) World **'Asthma Day'** is on **-**

    a) 5 September   b) 6 people wow   c) May 5   d) 4 December

B) Answer the following questions:-   **1x5=5**

i) Write the name of a **carminogen**.

Ans:-

ii) Write full name **'PAN'**

Ans:-

iii) What is the name of **human auditory** organ?

Ans:-

iv) Which forest in West Bengal has been declared as the World Heritage Site by **'UNESCO'**?

Ans:-

v) Write the source of **quinine**.

Ans:-

C) Answer the following questions :-   **2x5=10**

i) What are **cryoprotectants**? Give an **example**.

Ans:-

ii) What are the **envesic** species?

Ans:-

iii) Write down the harmful effects of **ozone hole.**

Ans:-

iv) What are the sources of **'SPM'?**

Ans:-

v) Name and source of some fluorinated gases which act as '**greenhouse gases'.**

Ans:-

MATH EMATICS- 40

1) Choose the correct option to complete the following answer:-   **$1\times14=14$**

i)If n^2-1 is a factor of the polynomial $an^4+bn^3+cn^2+dn+e$, then

   a) a+c+e=b+d   b) a+b+e=c+d

   c) a+b+c= d+e   d) b+c+d=a+e

ii) In a isosceles triangle ABC , AC=BC and $AB^2=2AC^2$ then measurement of $\angle C$ –

   a) 30°   b) 90°   c) 45°   d) 60°

iii) If the length of the shadow of a tower is $\sqrt{3}$ times its height , then angle of elevation of the sun is _____ .

   a) 30°   b) 45°   c) 60°   d) None of these

iv) A sum becomes Rs- 10650 in 5 years and Rs- 11076 in 6 years at simple interest . What is the sum ?

   a) Rs.8946   b) Rs. 8740   c) Rs. 8520   d) Rs. 8800

v) If $a:\frac{27}{64} = \frac{3}{4}:a$, then value of a ---

   a) $\frac{81}{256}$ b) $\frac{27}{64}$ c) $\frac{9}{8}$ d) $\frac{9}{16}$

vi) If $p+q \sqrt{5}$, $p-q = \sqrt{3}$ then value of $p^2 + q^2$ --------

   a) 8   b) 4   c) 2   d) -2

vii) If the area of base of a cylinder is 13.86 sq m and height is 8 m. Calculate the volume of the cylinder .

   a) 108.68 sq m   b) 110.88 sq m   c) 110.88 cubic metre   d) 111.88 cubic metre

viii) In the adjacent figure , ABCD is a cyclic quadrilateral in which AE is drawn parallel to CD, and BA is produced to F. If $\angle ABC = 92°$ and $\angle FAE = 20°$, find $\angle BCD$.
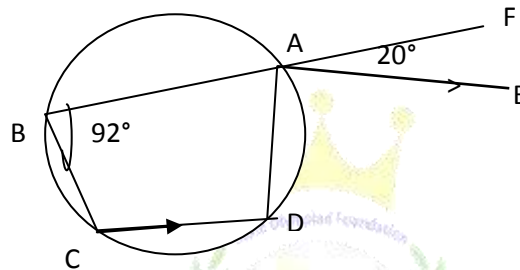
   a) 20°   b) 88°   c) 108°   d) 72°

ix) Two positions of a cube are shown below . Which number will appear opposite to 4.
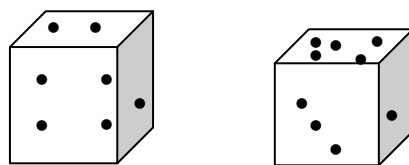
   a) 1   b) 6   c) 5   d) 3

x) A piece of paper is folded , cut and then unfolded. Which of the following will appear after unfolding ?
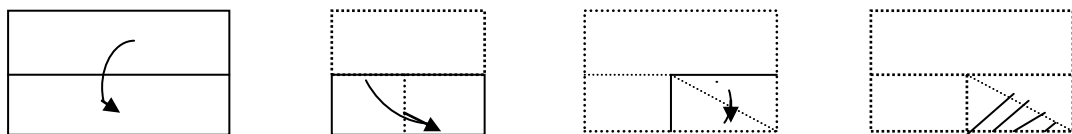
   a)   b)   c)   d)

xi) A and B are brothers. C and D are sister. A's son is D's brother . How is B related to C ?

     a) Father   b) Brother   c) Grandfather   d) Uncle

xii) A man is facing west. He turns 45° in the clockwise direction and then another 180° in the same direction and then 270° in the anticlockwise direction. Which direction is he facing now ?

     a) South   b) North west   c) West   d) South west

xiii) Which of the following number will appear in the place of '?' _____

                         ?
     13,32,24,43,35, _____ ,46,65,57,76.

     a) 45   b) 52   c) 54   d) 55

xiii) If $\div$ means +, **-** means $\div$, $\times$ means $-$ and + means $\times$, then

$$\frac{(36 \times 4) - 8 \times 4}{4 + 8 \times 2 + 16 \div 1} = ?$$

     a) 0   b) 8   c) 12   d) 16

2) Answer the following questions: **2×7=14**

i) If the two roots of a quadratic equation $5x^2 + 2x\text{-}3 = 0$ are α and β, then find the value of $\frac{\alpha^2}{\beta} + \frac{\beta^2}{\alpha}$

.
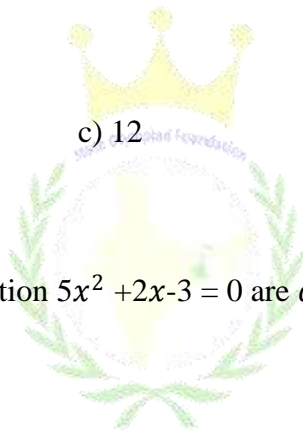
ii) Three points A,B and C lie on circle with centre O in such a way that AOCB is a parallelogram . Find the value of $\angle$AOC .

iii) If the mean of a frequency distribution is 8.1 and $\sum_{fi} x_i = $ 132+5k , $\sum_{fi.} = $ 20, then find the value of k.

iv) Find the ratio of the volume of a cylinder , a cone and a sphere , if each has the same diameter and same height ?

v) If DIAMOND is coded as VQYMKLV , GOLD is coded as SKNV , then how is SILVER coded ?

v) Complete the number series :

  5, 5, 12, 38, 101 , _____ , _____ .

vi) In a business , Anuj and Chirag invested amounts in the ratio 4:2 , whereas the ratio between amounts invested by Anuj and Bimal was 6:4 . If Rs. 314600 was their profit, how much amount did Bimal recive ?

C) Answer the following questions: **3×4=12**

1) Show that , $2(\cos^6\theta + \sin^6\theta) - 3(\cos^4\theta + \sin^4\theta) + 1 = 0$

2) A open tank of capacity 9000 litres measures externally 3.6 m × 2.4 m × 1.2 m and its walls are 5 cm thick . Find the thickness of the bottom of the tank .

3) A precious stone accidentally dropped and broken into three pieces, the weights of which are in the ratio 2 : 3 : 5 . The value of the stone varies as the cube of its weight. Calculate the percentage of loss thus incurred by the breakage . [By variation method]

4) At what rate of compound interest per annum, a sum of Rs. 1200 becomes Rs. 1348.32 in 2 years ?

For Rough Use