Paper Mathematics
Entrance Examination 2015 (5th Entry)
(For English Medium Only)

Total Marks: 100
Time Allowed: 90 Minutes

Note: Attempt All Questions.

i) Use of Calculator & Protractor is not allowed.

ii) Cutting and Erasing in Question No. 1 is not allowed.

Q. 1.

a. Write true or false.
   
i. \( A \cap A' = \{0\} \)

ii. If \( 2:5 = x:20 \) then \( x = 8 \)

iii. A line segment joining two points of a circle is called Arc

iv. In scalene triangle the length of all three sides are unequal

b. Fill in the Blanks.
   
i. \( \{a, e, i, o, u\} \) ___________________________ \( \{a, b, c, d, ..., z\} \)

ii. \( a^n \times b^n = \) ___________________________

iii. A __________________________ decimal may be recurring or non-recurring

iv. In \( \Delta ABC \), \( m < A = 60^\circ \), \( m < B = 40^\circ \), \( m < C = ? \)

c. Select the correct Answer
   
i. \( \left(3^0 + 2^0\right) \div 7^0 = \)
   
   \( (a) \frac{7}{5} \) \hspace{1cm} \( (b) \frac{1}{2} \) \hspace{1cm} \( (c) \frac{5}{7} \) \hspace{1cm} \( (d) 2 \)

ii. When we change 0.25 to rational number we get
   
   \( (a) \frac{1}{2} \) \hspace{1cm} \( (b) \frac{1}{3} \) \hspace{1cm} \( (c) \frac{1}{4} \) \hspace{1cm} \( (d) \frac{1}{7} \)

iii. Which of the following is not a perfect square.
   
   \( (a) \sqrt{16 + 9} \) \hspace{1cm} \( (b) \sqrt{25 + 9} \) \hspace{1cm} \( (c) \sqrt{16 + 9} \) \hspace{1cm} \( (d) \sqrt{25 - 9} \)

iv. Area of circle when radius = \( 10\frac{1}{2} \) can be written as
   
   \( (a) 346.5 \text{cm}^2 \) \hspace{1cm} \( (b) 33 \text{cm}^2 \) \hspace{1cm} \( (c) 350 \text{cm}^2 \) \hspace{1cm} \( (d) 500 \text{cm}^2 \)
Q. 2. If \( U = \{1, 2, 3, 4, 5 \ldots \ldots \ldots 20\} \)  
\[ A = \{1, 3, 5, 7 \ldots \ldots , 19\} \text{ and } B = \{2, 4, 6 \ldots \ldots , 20\} \]
then find \( A', B' \) and \( (A \cup B)', (A \cap B)' \)

Q. 3. Prove that \[
\frac{1}{4} \times \left[ \frac{1}{2} - \frac{1}{6} \right] = \left( \frac{1}{4} \times \frac{1}{2} \right) - \left( \frac{1}{4} \times \frac{1}{6} \right)
\]
Also mention that which property is used.

Q. 4. A cyclist crosses a 30 meter long bridge in 3 $\frac{1}{4}$ mints. Find the speed of the cyclist.

Q. 5. Hatim bought a bike for Rs. 135,000 and sold at 82% profit. Find the sale price of the bike.

Q. 6. Simplify \( (x^2 + y^2)(3x + 2y) + xy(x - 3y) \)

Q. 7. Find radius of a cylinder whose height is 14 cm and volume is 891 cm$^3$.

Q. 8. Find square root of "324" by division method.

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The End
پانچو اوردو، اسلامیات

دائیک مہینہ 2015 (5th Entry)

کل نمبر : 100

وقت: 90 دنی
سوال شمارہ 8: [مکمل نوشت کا متن نوشت کے مطابق]
(2) جواب

سوال شمارہ 9: [مکمل نوشت کا متن نوشت کے مطابق]
(2) جواب

سوال شمارہ 10: [مکمل نوشت کا متن نوشت کے مطابق]
(2) جواب

سوال شمارہ 11: [مکمل نوشت کا متن نوشت کے مطابق]

سوال شمارہ 12: [مکمل نوشت کا متن نوشت کے مطابق]
(الف) دروس 1 اثباتات

\( A \cap A' = \{0\} \)  

\( x = 8 \) \( \Rightarrow 2.5 = x \) \( \Rightarrow 2 \) \( \Rightarrow 20 \)  

(ب) تک تکرر

\( \{a, e, i, o, u\} \quad \{a, b, c, d, \ldots, z\} \)  

\( a'' \times b'' = \quad \)  

(الف) تک تکرر

\( m \leq A = 60^\circ \) \( \Rightarrow m \leq B = 40^\circ \) \( \Rightarrow m \leq C = \)  

(الف) تک تکرر

\( \left(3^0 + 2^0\right) + 7^0 = \)  

(الف) تک تکرر

\( \begin{array}{ll}
\text{(د)} & \frac{5}{7} \\
\text{(ج)} & \frac{1}{2} \\
\text{(ب)} & \frac{7}{5} \\
\end{array} \)  

(الف) تک تکرر

\( \begin{array}{ll}
\text{(د)} & \frac{1}{7} \\
\text{(ج)} & \frac{1}{4} \\
\text{(ب)} & \frac{1}{3} \\
\text{(ا)} & \frac{1}{2} \\
\end{array} \)  

(الف) تک تکرر

\( \sqrt{25 - 9} = \sqrt{16 + 9} = \sqrt{25 + 9} = \sqrt{16 + 9} = \)  

(الف) تک تکرر

\begin{array}{ll}
\text{(د)} & 10 \frac{1}{2} \\
\text{(ج)} & 350 \text{cm}^2 \\
\text{(ب)} & 33 \text{cm}^2 \\
\text{(ا)} & 346.5 \text{cm}^2 \\
\end{array} \)
\[ U = \{1, 2, 3, 4, 5, \ldots, 20\} \]
\[ A = \{1, 3, 5, 7, \ldots, 19\} \quad \text{او} \quad B = \{2, 4, 6, \ldots, 20\} \]

\[(A \cap B)' = (A \cup B)' = A', B' \]

\[
\frac{1}{4} \times \left[ \frac{1}{2} - \frac{1}{6} \right] = \left( \frac{1}{4} \times \frac{1}{2} \right) - \left( \frac{1}{4} \times \frac{1}{6} \right)
\]

**Problem 3:**

\[
\frac{1}{4} \times \left[ \frac{1}{2} - \frac{1}{6} \right] = \left( \frac{1}{4} \times \frac{1}{2} \right) - \left( \frac{1}{4} \times \frac{1}{6} \right)
\]

**Problem 4:**

A box is opened to contain 30 marbles, with 1/4 being red and the rest blue.

**Problem 5:**

A 138,000 kg truck drives at 62% efficiency, and the fuel capacity is 45 gallons.

**Problem 6:**

\[
(x^2 + y^2)(3x + 2y) + xy(x - 3y)
\]

**Problem 7:**

24 cm of lead is melted to form a cube with a volume of 891 cm³.

**Problem 8:**

The volume of a cylinder is 324π cm³. Calculate its radius.
Paper English
Entrance Examination 2015 (5th Entry)

Total Marks: 100
Time Allowed: 90 Minutes

Note: Attempt All Questions.

Q. 1 Write an Essay of 100-150 words on any one of the following topics:
   i) Information Technology
   ii) My Best Teacher
   iii) A Great Leader

Q. 2 Write a Story with the Moral “The Bee and the Dove”
OR
Write a letter to your friend inviting him to spend holidays with you.

Q. 3 Do as directed
   (i) Why is he weeping? (Change in to Future Continuous)
   (ii) She has been reading in this (Change into Interrogative)
        School for four years
   (iii) You did not accept my proposal (Present Indefinite Tense)
   (iv) I shall have taken a bath before 7 O’Clock. (Present Continuous Tense)
   (v) Have you heard any fresh news? (Future perfect Tense)

Q. 4 Change into Passive voice
   (i) Open the door.
   (ii) Do you know him?
   (iii) Someone has picked my pocket.
   (iv) The dog is chasing a cat.
   (v) He will help me.

Q. 5 Change the narrations:
a) My friend said to me, “I was sick yesterday”.
b) My brother says, “Your cycle is out of order”?
c) He says to me, “I am going”.
d) He said, “Honesty pays in the long run”
e) I said, “Fire burns.”

Q. 6 Fill in the blanks with correct preposition:
   (i) Assad is ready _______ his defence.
   (ii) The prize was reduced _______ five rupees.
   (iii) His progress is not satisfactory _______ me
   (iv) Man is not a slave _______ his passion
   (v) I take pride _______ my work.

Q. 7 Make meaningful sentences differentiating the pairs:
   a) Naugty, Knotty  b) Principal, Principle  c) Forth, Fourth  d) Lion, Loin
   e) Root, Route
Q. 8  ترکیب the following into Urdu.

Scientists have made impossible tasks possible. This vast world has been changed into a global village, because of science. But unfortunately inspite of all these, science has not changed the basic attitude towards the problems of our lives. Superstitions and false notions predominate in many areas of our social and economic life. By familiarizing science among the common people, we may bring in new social order.

Q. 9  بہت سے the passage carefully and answer the Questions at the end. Your answer must be to the point.

Nearly a thousand years age, a small boy, whose father was a person Tax-Collector, was the talk of the neighbours in Bokhara. At the age of ten he could repeat chapters of the Quran and many verses of Poetry. A green grocer taught him arithmetic and he was never tired of coming books that filled his mind with new ideas. When he was puzzled with his lessons as children are, he could go to the mosque and kneel quietly and pray to Allah, until his problem seemed not so hard to understand.

i. Why was the small boy the talk of the neighbours?
ii. What was his father?
iii. Where did he live?
iv. Who taught him arithmetic?
v. How did he manage to get new ideas?

Q. 10  ترکیب the passage into English.

(1) بیکاری شراوت کی جرِبی
(2) بے ویبی آدمی ہیں جو بھی بھیک سالگرہ ریا تھیا
(3) موری پات بر دہلی دو
(4) باغ میں گلاب کے نیوز ہو گئے سن بھوول نہیں
(5) آج گیا کام کل بر منت سچھور و