

SSC SPECIAL DAILY QUIZ -621**TOTAL QUESTIONS-40, TIME - 40 MINUTES, MARKS - 40****ARENA OF GENERAL KNOWLEDGE**

1. Which of the following is not included while estimating national income through income method?
(a) Rent (b) Mixed Income (c) Pension (d) Undistributed Profits
2. The Noble Prize was instituted by the country
(a) USA (b) UK (c) Russia (d) Sweden
3. The success of democracy depends upon the
(a) Right to Criticise (b) Right to Association
(c) Right to Personal Liberty (d) Right to Property
4. The Akaal Takh was built by
(a) Guru Ramdas (b) Guru Teg Bahadur (c) Guru Hargovind (d) Guru Nanak
5. Vikram Sarabhai Space Centre (VSSC) is at
(a) Thiruvananthapuram (b) Mumbai (c) Hyderabad (d) Bengaluru
6. In onion the edible part is
(a) Leaf (b) Root (c) Stem (d) Flower
7. Haemoglobin has highest affinity for
(a) Oxygen (b) Carbon Dioxide (c) Carbon Monoxide (d) Nitrogen
8. The water from a hand pump is warm in winter because
(a) Our body is cold in winter and the water appears to be warm
(b) The temperature inside the earth is higher than the atmospheric temperature
(c) The pumping process causes friction which warms up the water
(d) Inside water comes out and absorbs heat from the environment
9. The chief source of naphthalene is
(a) Coal Tar (b) Diesel (c) Charcoal (d) Camphor
10. Social forestry is
(a) Growing different types of plants together on private land
(b) Management of forest by cooperative societies
(c) Growing one type of plant in government owned land
(d) Growing and management of useful plants on government owned land
11. Who invented penicillin?
(a) William Harvey (b) Louis Pasteur (c) Alexander Fleming (d) Edward Jenner
12. The Vice President M. Venkaiah Naidu visited which of the following cities recently to attend the 12th Asia European Meeting (ASEM) summit?
(a) Brussels (Belgium) (b) Rome (Italy)
(c) Madrid (Spain) (d) Wellington (New Zealand)
13. Storm "Callum" hit which of the following countries recently?
(a) U.K. (b) South Korea (c) Japan (d) U.S.
14. The best example of a capital intensive industry in India is
(a) Textile Industry (b) Steel Industry
(c) Tourism Industry (d) Sports Goods Industry
15. Which case is related to Fundamental Rights?
(a) Golakhnath vs State of Punjab (1967) (b) West Bengal vs Union of India (1963)
(c) Sharma vs Krishna (1959) (d) State of Bombay vs Balsara (1951)
16. Which one of the following battles led to the foundation of the Mughal rule at Delhi?
(a) Third Battle of Panipat (b) Second Battle of Panipat
(c) Battle of Haldighati (d) First Battle of Panipat

17. Who among the following was not a physician?
 (a) Sushruta (b) Charaka (c) Charvaka (d) Dhanvantari
18. The largest Union Territory of India is
 (a) Chandigarh (b) Puducherry
 (c) Andaman and Nicobar Islands (d) Lakshadweep
19. Functional unit of "Kidney" is
 (a) Axon (b) Neuron (c) Nephron (d) Artery
20. The primary colours in photography are
 (a) Red, Blue, Yellow (b) Red, Yellow, Green
 (c) Red, Blue, Green (d) Blue, Yellow, Green
21. DOS is a
 (a) Direct Operating System (b) Dual Operating System
 (c) Disk Operating System (d) Dial-up Operating System
22. Which of the following causes the rusting of iron?
 1. Oxidation 2. Reduction
 3. Chemical Reaction with Oxygen 4. Chemical Reaction with CO₂
 (a) 1 and 2 (b) 2 and 3 (c) 3 and 4 (d) 1 and 3
23. Which of the following is not a "Green House Gas"?
 (a) Chlorofluorocarbons (b) Methane (c) Carbon Dioxide (d) Nitrogen
24. Which city of India is called as the "Silicon Valley of India"?
 (a) Bengaluru (b) Chennai (c) Hyderabad (d) Mumbai
25. Reliance Jio started a campaign with which Facebook owned company to train people about using the mobile messaging platform responsibly on their Jio phones?
 (a) Wechat (b) Whatsapp (c) Instagram (d) Telegram

ENGLISH BUZZ

Directions (Q. Nos. 26-35): Choose the correct alternative out of the four.

26. She sat ____ to dine before the round table.
 (a) below (b) down (c) beneath (d) in
27. The neighbours are complaining ____ the smell in your kitchen.
 (a) of (b) against (c) about (d) for
28. Two great tears ran slowly ____ the corners of her eyes.
 (a) down (b) below (c) from (d) by
29. He threw ____ her shoulders the modest shawl.
 (a) above (b) on (c) upon (d) over
30. He throws ____ words at random
 (a) out (b) in (c) away (d) off
31. The rat is hiding from us ____ the table
 (a) beneath (b) below (c) under (d) beside
32. He was sitting there all ____ himself in the dark.
 (a) with (b) by (c) beside (d) in
33. These nails are handy for hanging ____ pictures.
 (a) on (b) up (c) down (d) in
34. He forgot to wind ____ his watch before going to bed.
 (a) out (b) in (c) up (d) over
35. The circulars have all been sent _____.
 (a) in (b) out (c) away (d) round

TARK SHASHTRA

36. If $\sin \theta$ and $\cos \theta$ are two roots of the equations $ax^2 + bx + c = 0$ then
 (a) $(a - c)^2 = b^2 - c^2$ (b) $(a - c)^2 = b^2 + c^2$
 (c) $(a + c)^2 = b^2 - c^2$ (d) $(a + c)^2 = b^2 + c^2$
37. The equation whose roots are $\frac{1}{3 + \sqrt{2}}$ & $\frac{1}{3 - \sqrt{2}}$ is
 (a) $7x^2 - 6x + 1 = 0$ (b) $6x^2 - 7x + 1 = 0$
 (c) $x^2 - 6x + 7 = 0$ (d) $x^2 - 7x + 6 = 0$
38. If $0 \leq x \leq \pi$ and $81^{\sin^2 x} + 81^{\cos^2 x} = 30$, the x is equal to
 (a) $\frac{\pi}{6}$ (b) $\frac{\pi}{2}$ (c) $\frac{\pi}{4}$ (d) $\frac{3\pi}{4}$
39. The no. of solutions of the equation $\sin(e^x) = 5^x + 5^{-x}$ is
 (a) 0 (b) 1 (c) 2 (d) Infinite
40. If $A + B + C = 180^\circ$ $\angle B = 90^\circ$ then $\tan A \cdot \tan B \cdot \tan C = ?$
 (a) 1 (b) 0 (c) 2 (d) None of these

<u>YOUR SCORE</u>	<p><u>SCORE</u></p> <p>35-40 : Outstanding</p> <p>29-34: Very Good</p> <p>23-28: Good</p> <p>Less than 23: Average</p>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
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ANSWER KEYS

1.c . 2.d, 3.c, 4.c. 5.a, 6.c, 7.a, 8.b, 9.a, 10.b, 11.c, 12.a, 13.a, 14.b, 15.a, 16.d, 17.c, 18.c, 19.c, 20.c, 21.c, 22.d, 23.d, 24.a, 25.b, 26.b 27.c 28.c 29.d 30.a 31.c 32.b 33.b 34.c 35.b 36.d 37.a 38.a 39.a 40.a

EXPLANATIONS

36. d; Since $\sin \theta$ and $\cos \theta$ are the roots of the equation $ax^2 + bx + c = 0$

$$\therefore \sin \theta + \cos \theta = -\frac{b}{a} \quad \text{and} \quad \sin \theta \cos \theta = \frac{c}{a}$$

Now $(\sin \theta + \cos \theta)^2 = 1 + 2 \sin \theta \cos \theta$

$$\therefore \frac{b^2}{a^2} = 1 + \frac{2c}{a} = \frac{a + 2c}{a}$$

$$\Rightarrow b^2 = a(a + 2c) = a^2 + 2ac$$

$$\Rightarrow b^2 + c^2 = a^2 + 2ac + c^2 = (a + c)^2$$

Hence $(a + c)^2 = b^2 + c^2$

37. a; Given roots are $\frac{1}{3+\sqrt{2}}$ and $\frac{1}{3-\sqrt{2}}$

$$\text{Sum of the roots} = \frac{1}{3+\sqrt{2}} + \frac{1}{3-\sqrt{2}} = \frac{1}{7} \frac{6}{7}$$

$$= \frac{1}{3+\sqrt{2}} \times \frac{1}{3-\sqrt{2}} = \frac{1}{7}$$

\therefore The required equation is $x^2 - (\text{sum of the roots})x + (\text{products of the roots}) = 0$,

$$\Rightarrow x^2 - \frac{6}{7}x + \frac{1}{7} = 0$$

38. a; $81^{\sin^2 x} + 81^{\cos^2 x} = 30$

$$\Rightarrow 81^{\sin^2 x} + 81^{\sin^2 x} = 30 \Rightarrow 81^{\sin^2 x} + \frac{81}{81^{\sin^2 x}} = 30$$

Let $81^{\sin^2 x} = y$

$$\therefore y + \frac{81}{y} = 30 \Rightarrow y^2 - 30y + 81 = 0$$

$$\Rightarrow (y-27)(y-3) = 0$$

If, $y-27 = 0$ or $y = 27$

we get, $81^{\sin^2 x} = 27$ or $3^{4\sin^2 x} = 3^3$

$$\Rightarrow \sin^2 x = \frac{3}{4} \Rightarrow \sin x = \frac{\sqrt{3}}{2}$$

$$= \sin \frac{\pi}{3} \Rightarrow x = \pi/3$$

Now if, $y-3 = 0$ or $y = 3$

$$81^{\sin^2 x} = 3 \text{ or } 3^{4\sin^2 x} = 3^1 \Rightarrow 4\sin^2 x = 1$$

$$\Rightarrow \sin x = \frac{1}{2} = \sin \frac{\pi}{6} \Rightarrow x = \frac{\pi}{6}$$

39. a; Put, $5^x = y$. Then the given equation becomes

$$\sin(e^x) = y + \frac{1}{y} = \left(\sqrt{y} - \frac{1}{\sqrt{y}} \right)^2 + 2$$

$\Rightarrow \sin(e^x) \geq 2$. Which is not possible for any real value of x . Hence the given equation has no real solution.

40. a;

“THERE ARE ONLY TWO WAYS TO LIVE YOUR LIFE. ONE IS AS THOUGH NOTHING IS A MIRACLE. THE OTHER IS AS THOUGH EVERYTHING IS A MIRACLE.”

“ALBERT EINSTEIN”