Test structure and sample questions

VII. Test structure and sample questions

ASTIK -Entrance Examination is an objective type test designed and developed to ascertain the aptitude of the candidates to undergo the Post Graduate Programme in Computer Application. Aptitude is the potential of an individual to perform subsequent to proper training. Therefore ASTIK - Entrance Examination is designed to identify the potential of the candidates.

The ASTIK -Entrance Examination has five sections, each section having thrty questions. A total of 150 questions are to be attempted over 120 minutes. The test structure is given below:

Section No	Section Name	No. of Questions
1.	Physics	20
2	Chemistry	20
3	Mathematics	20
4	Statistics	20
5	General Knowledge	20
6	English	20
7	Fundamentals of Computer Awareness	30
	Total	**150**

Sample Questions

A few sample questions are given below for the guidance of the candidates in the preparation. These samples do not necessarily indicate either the types or the difficulty levels of questions that can be in the actual test. In general the preparation standard expected is that of a graduate from an Indian university having completed 10+2 and degree in Computer Application pattern of education. However, the knowledge level required for attempting the section on Mathematics Skills is that of 10th standard under the Central Board of Secondary Education.

Test structure and sample questions

ASTIK - MCA
Entrance Exam-2010

Sample Questions

MATHS

1) What is the angle between the line $\vec{r} = (-\vec{i} + \vec{j} + 3\vec{k}) + t(2\vec{i} + \vec{j} - 2\vec{k})$ and the plane $\vec{r}.(\vec{i} + \vec{j}) = -1$?

A) π/6 B) π/3 C) π/4 D) 2π/3

---

2) $\int_0^{\frac{\pi}{2}} \frac{dx}{1+Tan^3 x} = ?$

A) 0 B) 1 C) π / 2 D) π / 4

---

3) For the curve 2y=3 sin 2θ and x=e $^{\theta}$ sin θ, 0 ≤ θ ≤ II , what is the value of θ of the tangent parallel to x-axis?

A) 0 B) II /2 C) II /3 D) II/4

PHYSICS

1) The height 'y' and the distance 'x' along the horizontal plane of a projectile are given by y = (8t − 5t2) meter and x = (6t) meter, where't' is in seconds. The velocity with which the projectile is projected is:

A) 8 m/s B) 10 m/s C) 12 m/s D) 16 m/s

---

2) A body is projected downwards at an angle of 30o to the horizontal with a velocity of 9.8 m/s from the top of a tower 29.4m high. How long will it take before striking the ground?

A) 1 sec B) 2 sec C) 3 sec D) 4 sec

---

3) A body of mass 2 kg is tied to one end of a string of length 1m and is whirled in a horizontal circle at 15 rpm. The tension in the string is:

A) 1.2 N B) 12.6 N C) 4.9 N D) 2 N

ENGLISH

Directions for Questions 1:

Choose the option which will CORRECTLY fill the blank.

1) He stumbled _____ a stone and fell _____ a ditch.

A) From, into B) Over, to C) Over, into D) On, in

Directions for Questions 2:

Choose the word nearest in meaning to the word in ITALICS from the given options.

2) The antidote to these problems is hard to find.

A) Remedy B) Answer C) Cause D) Result

Directions for Questions 3:

Choose the answer option which will CORRECTLY fill the blank.

3) This is ____ old-fashioned approach.

A) A B) An C) The D) No article required

CHEMISTRY

1) A metal M form free lattice and the mass of one atom of M is 'm'g. The weight of unit cell of the crystal is:

A) '4m' g B) 'm' g C) '2m' g D) 'm/2' g

---

2) Which of the following is NOT acceptable for a solution of NaCl in water?

A) Van't Hoff factor is calculated as 3

B) Its boiling point is higher than that of water

C) It freezes at a temperature below $0^{o}C$

D) Its osmotic pressure is higher than calculated from $CRT = \pi$

---

3) Which of the following is TRUE for the reaction? $PCl5\ (g) \leftrightarrow PCl3\ (g) + Cl2\ (g)$?

A) $\Delta H = \Delta E$

B) $\Delta H > \Delta E$

C) $\Delta H < \Delta E$

D) $\Delta H = -\Delta E$

GENERAL KNOWLEDGE

1) How many number of lions does the Ashoka Pillar consists of?

A) 2 B) 6 C) 3 D) 4

2) What does the chemical formula H_2O stand for?

A) Petrol B) Diesel C) Water D) Gas

3) Which is the largest State in India?

A) Rajasthan B) Madhya Pradesh C) Assam D) Gujarat

COMPUTER FUNDAMENTALS

1) A user tries to connect to the Internet using a 56kbps modem through an ISP. But the user complains of an extremely slow connection. What would you check for?

A) Defective phone cable

B) IRQ conflict

C) Old device drivers of the modem

D) None of the options

2) If you want your computer to connect (or prompt to connect) when you open your Web browser or email client, then:

A) Set your Dial-Up connection as the default connection in the Control Panel.

B) This cannot be done.

C) Change the modem driver setting.

D) Both A and C

3) What is the significance of the tool shown in the following picture?

A) Paint Brush B) Graphical Primitive C) Format Painter D) Text Colour

STATISTICS

1) What is the mode for the following data: 5, 6, 3, 6, 11, 7, 9, 10, 2, 4, 10, 6, 2, 1, 5 ?

   A) 10

   B) 5

   C) 3

   D) 6

2) Which of the follwing is a measure of dispersion?

   A) Mean

   B) Median

   C) Standard deviation

   D) Mode

3) There are 50 students in a class. What is the probability that one student gets selected for the free trip to National Rock Festival ?

   A) 0.02

   B) 0.04

   C) 0.05

   D) 0.06