



Capital University of Science & Technology

Islamabad

Expressway, Kahuta Road, Zone-V, Islamabad
Phone: 92-51-111-555-666 Fax:92-51-4486705
Email: info@cust.edu.pk Website: http://www.cust.edu.pk

Sample Admission Tests for MPhil/MS&PhD Degree Programs

Section -1 ENGLISH

1. (Choose that word or pair of words which best completes the meaning of the sentence.)

_____ manage to survive adverse climatic conditions thanks to their habit of migration. (MCQ - CHOOSE ONE)

- Birds*
- The bird
- A bird
- That birds
- This birds

2. (Choose the correct option that can best replace the double quoted part of the given sentence.)

She made the baby "took a nap" as it was cranky and fretful, due to a cold. (MCQ - CHOOSE ONE)

- take a nap*
- to take a nap
- taking a nap
- take nap
- to take nap

3. (Choose that word or pair of words which best completes the meaning of the sentence.)

He is _____ for his licentious behavior, though he has been crying himself hoarse to the contrary. (MCQ - CHOOSE ONE)

- famous
- illustrious
- renowned
- notorious*
- distinguished



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Section -2 QUANTITATIVE

1. If the first day of an year is Sunday, how many Sundays will there be in that year? (MCQ - CHOOSE ONE)

- 50
- 51
- 52
- 53*

2. The average speed of a car is 70km/hour. The distance travelled by it in 2.5 hour is: (MCQ - CHOOSE ONE)

- 140 km
- 175 km*
- 210 km
- none of these

3. Which of the following is always nonnegative? (MCQ - CHOOSE ONE)

- $x^3 - y^3$
- $x^2 + y^2$ *
- $x^3 + y^3$
- $x^2 - y^2$



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Section -3 Specialization (Electrical Engineering)

1. The derivative of the function $x^3+y^3=18xy$ at point (1,2) is (MCQ - CHOOSE ONE)

- 4*
- 2
- 2
- 4

2. A voltage source having 200 V open circuit voltage and its internal resistance of 100 ohm is equivalent to a current source (MCQ - CHOOSE ONE)

- current source in parallel with 100 ohm*
- current source in series with 100 ohm
- current source in parallel with 200 ohm
- current source in series with 200 ohm

3. Capacitor is used to effectively decouple chips and make them immune to the power fluctuations caused by other chips with high/fluctuating power usage. (MCQ - CHOOSE ONE)

- Decoupling Capacitors*
- Bypass capacitor
- Input coupling capacitor
- Output coupling capacitor



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Section -3 Specialization (Mechanical Engineering/Engineering Management)

1. The depth for a given hole on an engineering drawing indicates the length of the _____ portion. (MCQ - CHOOSE ONE)
 - Threaded
 - Cylindrical*
 - Reamed
 - None of the above
2. A double-start screw has 10 threads per inch. What is the lead of this screw ? (MCQ - CHOOSE ONE)
 - 1.0 inch
 - 0.5 inch
 - 0.2 inch*
 - 0.1 inch
3. Location of center of pressure is such that it is always _____. (MCQ - CHOOSE ONE)
 - above the centroid of the plane surface
 - at the center of buoyancy
 - below the centroid of the plane surface*
 - below the center of buoyancy



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Section -3 Specialization (Civil Engineering)

1. The type of Hydraulic Jump with up stream 's Froud 's no of 4.5 to 9 is called as: (MCQ - CHOOSE ONE)

- Strong*
- Weak
- Steady
- Undular

2. Which of the following has highest Poisson's ratio? (MCQ - CHOOSE ONE)

- Rubber*
- Steel
- Aluminum
- Copper

3. In a rigid pavement, the load is transferred: (MCQ - CHOOSE ONE)

- From grain to grain to subgrade
- Through beam action on weak soils*
- Both A and B above
- None of the above



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Section -3 Specialization (Computer Science)

1. What is the output of the following program?

```
#include  
void main(void){  
int a=10;  
if(a>5);  
if(a=10) cout<<"YES";  
else;  
cout<<"NO";  
} (MCQ - CHOOSE ONE)
```

- Yes
- No
- YesNo*
- There is an error in the program.

2. _____ of a relation is the minimum non-empty subset of its attributes such that the values of the attributes uniquely identify each tuple of the relation. (MCQ - CHOOSE ONE)

- Super key
- Candidate key*
- Foreign key
- Secondary key

3. _____ Memory is Volatile. (MCQ - CHOOSE ONE)

- Main
- Random Access
- Both 1st & 2nd option*
- Virtual



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Section -3 Specialization (Bioscience)

1. **Fungal Cell wall is made of (MCQ - CHOOSE ONE)**
 - Cutin**
 - Cellulose**
 - Chitin***
 - Pectin**

2. **The functional unit of human kidney is (MCQ - CHOOSE ONE)**
 - Nephridia**
 - Collecting tubule**
 - Nephron**
 - Nephrotome***

3. **The study of fossils is called: (MCQ - CHOOSE ONE)**
 - Environmental Biology**
 - Historical biology**
 - Palaeontology***
 - Social biology**



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Section -3 Specialization (Mathematics)

1. The area of the region bounded by the line $y=2x$ and the x-axis from $x=1$ to $x=3$ is . (MCQ - CHOOSE ONE)

- 3 sq. units
- 6 sq. units
- 8 sq. units*
- 9 sq. units
- None of these

2. The partial derivative of $z= x^2+y^2$ with respect to x is _____ . (MCQ - CHOOSE ONE)

- $2x + 2y$
- $2x^*$
- $2y$
- $2x + y^2$

3. How many generators does the group $(Z_{24}, +)$ have ? (MCQ - CHOOSE ONE)

- 6
- 2
- 8^*
- 4
- 24



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Section -3 Specialization (Management Sciences/Project Management)

1. Recruitment means (MCQ - CHOOSE ONE)

- Conducting interviews
- Taking tests
- Creating a pool of candidates*
- All of above

2. What can be a quick, efficient way of gathering information from a large number of employees? (MCQ - CHOOSE ONE)

- Research
- Interview
- Observation
- Questionnaire*

3. Stress can affect not only your health, but also other aspects of your life. What else can be affected by stress? (MCQ - CHOOSE ONE)

- Family relationships
- Work performance
- Your attention to safety
- All of the given options*



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Section -3 Specialization PHARMACY

1. Part of the prescription that lists the instructions about dispensing the medication, labeling and refill information is known as (MCQ - CHOOSE ONE)

- Subscription*
- Superscription
- Inscription
- Signa

2. Which one of the followings activates Lipoprotein Lipase Enzyme? (MCQ - CHOOSE ONE)

- Lovastatin
- Niacin
- Gemfibrozil *
- All of A, B and C

3. Which one of the followings group of antibiotics have an antimalarial effect? (MCQ - CHOOSE ONE)

- Aminoglycosides
- Tetracycline*
- Carbapenems
- Penicillin