

3/23

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Candidate's Seat No : _____

Five Years Integrated M.Sc. I.T. (Sem.-1) (IT-IMS & CS) Examination

Communication Skill-1

Time : 2-30 Hours]

April 2019

[Max. Marks : 70

Instructions:

1. Figures to the right indicates full marks
2. Neat diagrams must be drawn wherever necessary.

Q. 1)

A) Explain different ways to resolve conflicts.

(14 Marks)

Or

Explain the impact of praise on others.

B) Choose the appropriate option for the given question:

(04 Marks)

1. Gestures should _____
 - a. Be maximum and convey more than words
 - b. Be minimal and should not convey anything
 - c. Be moderate and should reinforce or complement the speech
 - d. None of the above
2. You are presenting a new idea to your boss. He listens to you, his hands crossed, leaning back in his chair, with a stern expression. It shows
 - a. He is very keen on your idea
 - b. He is not open to your idea
 - c. He is relaxed and attentive
 - d. He wants you to change your idea
3. In a letter conveying bad news, explanations for the refusal have to appear to the reader.
 - a. Fair and realistic
 - b. Fair and flexible
 - c. Fair and negotiable
 - d. Fair and based on policy
4. What are the four phases of the AIDA plan?
 - a. Attraction, interest, desire, action
 - b. Attention, interaction, desire, action
 - c. Attention, interest, desire, action
 - d. Attention, interest, direction, action

Q. 2)

A) Explain the concept of negotiation.

(14 Marks)

Or

List and explain the major elements of negotiation preparation.

B) Choose the appropriate option for the given question:

(4 Marks)

1. One of the following is not an example of psychological noise
a. Hostility b. Fear c. Defensiveness d. Headache
2. Sounds that distract communicators fall into the category of
a. Physical noise b. Psychological noise c. Physiological noise d. None of the above
3. Voice qualities include all of the following except
a. Volume b. Gestures c. Rate of speech d. Pronunciation
4. Enunciation refers to
a. Pitch of the voice b. Rhythm of speech c. Rate of speech d. Articulation of speech

Q. 3)

A) List and explain barriers to listening.

(14 Marks)

OR

Explain the concept of non-verbal communication.

B) Choose the appropriate option for the given question:

(3 Marks)

1. _____ is not an example of a nonverbal message.
a. A stern and serious expression b. Laughter c. A letter d. A handshake
2. The sender is sometimes known as the
a. Recorder b. Encoder c. Decider d. Beginner
3. An individual trying to speak fast, with an irregular rhythm and long breaks in between can indicate
a. A speaking disorder or nervousness
b. Excitement
c. Confidence and authority
d. Calmness or sense of purpose
4. A speech must be basically judged by its
a. Content b. Delivery c. Speaker d. Subject

Q. 4)

(14 Marks)

A) Imagine you are the Marketing Executive of a special, edible Ink Manufacturing Company. One of your Regular customers, a candy manufacturer, has asked you to supply 20 bottles of Red Ink in anticipation of Increased demand for his candies in the near future. Unfortunately, you can only supply 5 bottles at this Time. However, you can supply 20 bottles of Blue Ink. **Write a letter to your customer explaining the Alternative and suggest that the Blue Ink can be bought this time. (Minimum 150 words)**

OR

Imagine you are the Director of a popular Cold Drinks Manufacturing company. A group of students from the local university approach you for sponsorship of the Annual University Festival. As the Director, the company allows you to sponsor such events, as they are a good marketing and advertising platform. The students request you for a sponsorship of Rs.1, 00,000 to be paid in cash before the event begins. You are however, not very enthusiastic about this particular festival but you think the company can sponsor up to Rs.20,000. The payment can only be made by cheque after the event is over. **Write a letter, informing the student representative, Manoj, about the alternative. (Minimum 150 words)**

B) Choose the appropriate option for the given question: (Any Three) (3 Marks)

1. If a bad news letter begins with a refusal and then follows it up with an explanation for the refusal
 - a. The reader will most likely read the explanation
 - b. The reader will accept the explanation with an open mind
 - c. The reader will most likely not read the explanation with an open mind
 - d. None of the above
2. Letters about the unpleasant begin with
 - i. A neutral idea that leads to the reason for refusal
 - ii. A clear statement of the refusal
 - iii. A statement that leads the reader to expect good news

a. i & iii b. i & ii c. ii & iii d. i only
3. The element of communication that is not common to both the encoder and the decoder is

a. Attitudes	b. Experiences
c. Communication ability	d. None of the above
4. The 'grapevine' is a source of information. It is a form of

a. Lateral communication	b. Informal communication
c. Downward communication	d. None of the above

Five Years Integrated M.Sc. I.T. (Sem.-1) (IT-IMS & CS) Examination

Basics of Electronics

Time : 2-30 Hours]

April 2019

[Max. Marks : 70

Instructions:

1. Figures to the right indicates full marks
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Question 1-A) Solve the following problems.

(14 Marks)

1. A heater with a resistance of 8Ω is connected across the 120 V power line. How much is current I?
2. How much the voltage if a 12Ω resistor if carrying a current I of 2.5 A?
3. How much the resistance R of a lightbulb if it draws 0.16 A current from a 12 V battery?
4. Calculate power P if current I is 2 A in a 5Ω resistor.
5. How much current flows in the filament of a 300 W bulb connected to the 120 V power line?
6. Two resistors R1 and R2 of 5Ω and R3 of 10Ω are in series. How much is total Resistance?
7. Resistors R1 of 10Ω , R2 of 20Ω and R3 of 30Ω are connected in series. Calculate the individual resistor voltage drops.

OR

Question 1-A)

Describe the basic structure of an atom. Explain the electron behavior in atom. Define Conductor, Insulator and Semi-conductor with at least one example.

Question 1-B) Choose the appropriate option for the given question :(Any 4)

(04 Marks)

1. Which have more free electrons?

a. Conductor	b. Insulator	c. Semi-conductor	d. Atom
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2. Which is a semi-conductor material?

a. Copper	b. Silver	c. Silicon	d. Neon
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3. The unit of potential difference is

a. Volt	b. Ampere	c. Siemens	d. Coulomb
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4. In series circuit, the current I is
 - a. Different in each resistor
 - b. The same everywhere
 - c. The highest near the positive and negative terminals of the voltage source
 - d. Different at all points along the circuit
5. The sharing of valence electrons in a silicon crystal is called

a. Doping	c. The avalanche effect
b. Covalent bonding	d. Coupling

6. If the secondary current in the step-down transformer increases, the primary current will
- Not change
 - Increase
 - Decrease
 - Drop a little

Question 2-A) Calculate the Resistance value using color code and chip code. (14 Marks)

- Red, Green, Red and Gold
- Orange, Blue, Green, Black and Green
- Yellow, Yellow, Red, Red and Brown
- 104 chip code
- 1R8 chip code
- Green, Brown, Orange and Gold
- Brown, Black, Orange and Silver

OR

Question 2-A) Describe the difference between an open and short circuit. Describe the comparison of Series And Parallel circuit.

Question 2-B) Answer the following questions in one or two sentences. (Any 4) (04 Marks)

- List the two basic particles of electric charge.
- Define the term ion.
- List the 3 forms of Ohm's law.
- Draw the schematic symbols for fixed resistor, potentiometer.
- Draw the schematic symbols for AND and NOT gate.
- What is a doping?

Question 3-A) What is a Universal Gate? Explain all the universal gates in detail. (14 Marks)

OR

Question 3-A) What is a capacitance? What is a capacitor? Describe the charging and discharging process of capacitor. Calculate the series and parallel connected capacitors.

Question 3-B) Choose the appropriate option for the given question :(Any Three) (03 Marks)

- The unit of inductance is
 - Farad
 - Henry
 - Ohms
 - Siemens
- A capacitor consists of
 - Two insulators separated by a conductor
 - A coil of wire wound on an iron core,
 - Two conductors separated by an insulator
 - None of above
- A current of 1000 μ A equals to
 - 1 A
 - 1 mA
 - 0.01A
 - None of above

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4. A $120\text{ K}\Omega$ resistor R_1 and a $180\text{ K}\Omega$ resistor R_2 are in parallel. How much is the equivalent resistance?
a. $72\text{ K}\Omega$ b. $300\text{ K}\Omega$ c. $360\text{ K}\Omega$ d. $90\text{ K}\Omega$
5. The battery is a DC voltage source because it can't reverse the polarity across its output terminals.
a. True b. False

Question 4-A) List any 4 types of resistors and describe the characteristics of each type. (14 Marks)

OR

Question 4-A) What is a diode? Explain the PN junction diode with its biasing process in detail.

Question 4-B) Answer the following questions in 1 or 2 sentences. (Any 3) (03 Marks)

1. What is the main difference between rectifier and zener diode?
2. What types of impurities are added during the doping process?
3. Give the color for the number 4 color band.
4. Give the IC diagram of EX-OR gate.
5. Define the conductance.

M.Sc. IT (IT-IMS & CS) (5 Yr. Integ.) (Sem.-1) Examination

Computer Organization

Time : 2-30 Hours]

May 2019

[Max. Marks : 70

Instructions:

1. Figures to the right indicates full marks
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Question 1-A) What is a Bus? List the types of Buses and their usage. List the name of external bus available in PC and describe any one of them. (14 Marks)

OR

Question 1-A) What is a chipset? List the types of chipset available in PC. Describe each with their functions.

Question 1-B) Choose the appropriate option for the given question: (Any Four) (04 Marks)

1. The maximum number of clock cycles that the CPU can handle in a given period of time is referred to as its
 - a. Frequency
 - b. Clock speed
 - c. CMOS
 - d. BIOS
2. Which CPU feature enables the microprocessor to support running multiple OSs at the same time?
 - a. Clock multiplying
 - b. Caching
 - c. Pipelining
 - d. Virtualization support
3. Which socket supports an Intel Core i5?
 - a. LGA 775
 - b. LGA 1155
 - c. Socket C
 - d. Socket AM3+
4. Which of the following control panel applet will display the amount of RAM in your PC?
 - a. System
 - b. Devices and Printers
 - c. Device Manager
 - d. Action Center
5. Which variation of the PCI bus was specifically designed for laptops?
 - a. PCI-X
 - b. PCIe
 - c. Mini-PCI
 - d. AGP

6. What sort of power connector did a floppy drive typically use?
- Molex
 - Mini Molex
 - Sub-mini
 - Micro

Question 2-A) what is the differences between SDRAM & DDR RAM? Describe DDR3 RAM in detail. (14 Marks)

OR

Question 2-A) What is a RAID? What are the advantages of RAID? List the different levels of RAID. Describe any 2 RAID levels with diagram.

Question 2-B) Answer the following questions in 1 or 2 sentences. (Any 4) (04 Marks)

- What is a clock multiplier?
- What is a Virtualization support provided by CPU?
- List the processor socket types available on motherboard.
- How does DDR RAM provide double data rate?
- What is an XMP feature related to DDR3 RAM?
- What is a TPM?

Question 3-A) What is the difference between impact and non-impact printers? List the name of impact and non-impact printers. Explain the working process of Inkjet printer in detail. (14 Marks)

OR

Question 3-A) List the names of the power connectors of SMPS. Describe them all in detail.

Question 3-B) Choose the appropriate option for the given question:(Any 3) (03 Marks)

- How many pins does a SATA connector have on motherboard?
 - 6
 - 7
 - 12
 - 15
- Which of the following is a common spindle speed for an HDD?
 - 5200
 - 7200
 - 9200
 - Not applicable
- Which RAID standard requires at least 4 drives?
 - 1
 - 2
 - 5
 - 10
- Which packaging is used for DDR memory?
 - 168 pins DIMM
 - 72 pins SIMM
 - 184 pins DIMM
 - RIMM

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5. What is the function of the laser in a laser printer?
 - a. It heats up the toner so it adheres to the page
 - b. It charges the paper so it will attract toner
 - c. It creates an image of the page on the drum
 - d. It cleans the drum before a page is printed.

Question 4-A) What is the difference between traditional and SSD hard drive? Describe SSD hard drive technology in detail. (14 Marks)

OR

Question 4-A) List the front panel connectors and describe each in detail.

Question 4-B) Answer the following questions in 1 or 2 sentences. (Any 3) (03 Marks)

1. How can we configure master/slave settings in hard drive?
2. What is the use of logical partition?
3. What is a mirrored volume?
4. What is the use of Barcode Reader and Smart Card reader?
5. List the hardware requirements for Home Theater server.

