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Total No. of Pages : 7

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**T.E. (C.S.E.) (Part - I) (Pre-revised) (Old) Examination,
December - 2015**

NETWORK TECHNOLOGY

Sub. Code : 45605

Day and Date : Saturday, 12 - 12 - 2015

Total Marks : 50

Time : 04.00 p.m. to 05.00 p.m.

- Instructions:**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate marks.

- 1) In AMPS, _____ bits SID numbers are uniquely assigned to cellular systems. [1]
A) 16 B) 24
C) 6 D) 15
- 2) The frequency reuse number of D-AMPS is _____. [1]
A) 8 B) 7
C) 6 D) 18
- 3) CDMA cellular systems use a digital modulation technique known as _____. [1]
A) Amplitude Shift Keying B) Phase Shift Keying
C) Frequency Shift Keying D) Spread Spectrum
- 4) Personal Digital Communications (PDC) systems supplied by motorola were deployed in _____. [1]
A) Japan B) Europe
C) United States D) China
- 5) _____ was originally designed to provide mobile packet data services as an overlay system for AMPS cellular system. [1]
A) HSCD B) GPRS
C) CDPD D) EDGE

P.T.O.

- 6) Cells are grouped in to _____. [1]
A) NSS B) Cluster
C) OSS D) BSS
- 7) The _____ system allows a large enough increase in capacity. [1]
A) Network B) Cluster
C) Cellular D) Hierarchical
- 8) Values of Reuse Number can only take on numbers calculated from _____ expression where i and j are integers. [1]
A) $i^2 + ij + j^2$
B) $i^3 + 2ij + j^3$
C) $i^2 + 2ij + j^2$
D) $i + ij + j$
- 9) For cluster size of 4, the reuse distance is _____. [1]
A) 22.913 km B) 22.32 km
C) 17.913 km D) 17.32 km
- 10) AMPS system did not yield usable voice quality radio links unless S/I ratio exceeding _____ dB was available. [1]
A) 22 B) 18
C) 17 D) 7
- 11) LAI is broadcasted on _____ channel. [1]
A) PCH B) BCCH
C) SCH D) RACH
- 12) Communication between a remote HLR and MSC/VLR occurs over _____ network. [1]
A) SS7 B) Backhaul
C) ATM D) Optical

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- 13) The BS will forward the updated information to the _____ database located in the portion of the wireless network. [1]
A) HLR
B) VLR
C) EIR
D) All of these
- 14) The _____ response will start the process by which communication between PSTN and/or PDN will be established with the mobile. [1]
A) SDCCH
B) Radio request
C) Paging
D) CBCH
- 15) The _____ sets a discontinuous transmission (DTX) bit to either permit or disallow this mode of operation. [1]
A) RBS
B) MS
C) BSC
D) MSC
- 16) The 1900-MHz PCS band may be used for _____ technologies. [1]
A) GSM
B) NA-TDMA
C) CDMA
D) All of these
- 17) _____ bit Walsh Codes are used in IS-95 CDMA System. [1]
A) 64
B) 48
C) 128
D) 32
- 18) The CDMA _____ is used to provide a reference signal for all the SD's within a cell. [1]
A) Synchronization Channel
B) Pilot Channel
C) Paging Channel
D) Traffic Power Control Channel

- 19) The _____ is used to provide data scrambling on the forward traffic channels. [2]
- A) Long PN code
 - B) Short PN code
 - C) Walsh Code
 - D) Pilot Code
- 20) CDPD works by sharing _____ spectrum for both data and voice services. [1]
- A) AMPS
 - B) GSM
 - C) UMTS
 - D) GERAN
- 21) The _____ network runs in concert with a GSM wireless network. [1]
- A) CDPD
 - B) UTRANS
 - C) GPRS
 - D) W-CDMA
- 22) For a mobile terminated SMS transfer the message is always routed from SC to the _____. [1]
- A) SMS-IW MSC
 - B) SMS-GMSC
 - C) MS
 - D) MSC/VLR
- 23) The maximum data rate per timeslot in GPRS using GMSK modulation scheme is _____ kbps. [2]
- A) 13.4
 - B) 15.6
 - C) 21.4
 - D) 54.4

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- 24) The reason to slow acceptance of WLAN's during late 1990's is _____ as compared to Wired LAN's. [2]
- A) Low data rate B) Wireless medium
C) Quality of service D) Noise
- 25) The IEEE 802.11a extension specified operation at rates up to _____ in the newer frequency band. [1]
- A) 11 MBPS B) 5.5 MBPS
C) 32 MBPS D) 54 MBPS
- 26) In WLAN, which of the following IEEE extension uses 5GHz frequency band? [2]
- A) 802.11g B) 802.11b
C) 802.11a D) 802.11n
- 27) WLAN radio link signals are protected from outside EM interference. [1]
- A) True B) False
- 28) The _____ provides the logical connect point between the Wireless LAN and Wired LAN's. [2]
- A) Portal B) AP
C) STA D) ESS
- 29) The typical WPAN has a coverage area of approximately 10 meters with a transmitting output power of _____. [2]
- A) 1 W B) 10 mw
C) 1 mw D) 10 w

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- 30) In Bluetooth packet format, header consists of _____ bits that undergo a rate of 1/3 FEC encoding process. [1]
- A) 18 B) 32
C) 54 D) 64
- 31) In Bluetooth, _____ packet is used to provide information about the sending device address, correct clock value, scan mode, power class and AM _address.[1]
- A) FHS B) NULL
C) POLL D) ID
- 32) _____ provide network access to buildings through exterior antennas communicating with a central radio BS over a point to multi point radio link.[1]
- A) WMAN B) WPAN
C) WLAN D) WSN
- 33) The IEEE _____ provides enhancement to standard to support operation of subscriber stations moving at vehicular speeds. [2]
- A) 802.16a B) 802.16d
C) 802.16e D) 802.16c
- 34) The ATM header consists of information about the ATM connection. [1]
- A) True B) False
- 35) The Mac Sub layer is structured to provide support for multiple physical layer implementations over a broad range of frequencies in the microwave & _____ Region. [2]
- A) millimeter wave B) centimeter wave
C) kilometer wave D) none of the above

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- 36) The original 802.16 standards called for operation in licensed bands in the 10 to 66 GHz frequency range where line of sight is required for satisfactory operation. [2]
- A) True
- B) False
- 37) A wireless MAN effectively serves as a _____ to an existing network infrastructure. [1]
- A) Router
- B) Gateway
- C) Bridge
- D) None
- 38) Mesh Network are used to provide NLOS operation. [1]
- A) True
- B) False
- 39) The network control sub frame consist of network entry and configuration Brust. [1]
- A) Yes
- B) No
- 40) The IEEE 802.16 Wireless MAN-OFDMA physical layer option is a wireless access technique based on OFDM modulation. [2]
- A) True
- B) False



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Total No. of Pages : 12

T.E. (Computer Science & Engineering) (Part - III) (Semester - V)
Examination, December - 2015
NETWORK TECHNOLOGIES (New) (Online)
Sub. Code : 66297

Day and Date : Thursday 17 - 12 - 2015

Total Marks : 50

Time : 03.30 p.m. to 04.30 p.m.

- Instructions :**
- 1) Candidate can attempt any number of questions out of which maximum of 50 marks questions will be considered and each question contain 1 M.
 - 2) The correct answer is to be written in the given OMR sheet by darkening the circle using blue or black ball pen.
 - 3) To mark the correct answers follow the instruction given in OMR sheet.
 - 4) Rough work should be done on last paper of question paper.
 - 5) OMR and question paper should be handed over to supervisor after the exam.

- 1) What is the access point (AP) in wireless LAN?
 - A) Device that allows wireless devices to connect to a wired network
 - B) Wireless devices itself
 - C) Both (A) and (B)
 - D) None of the mentioned
- 2) Which of the following are interface technologies?
 - A) Cognitive radio technology
 - B) MIMO technology
 - C) Ultra wide band pulse transmission
 - D) All above

P.T.O.

- 3) The mobile broadband wireless technology is defined by standard.
- A) 802.11
 - B) 802.20
 - C) 802.16
 - D) 802.15
- 4) Broadband microwave system provides.
- A) Provide variety of services as licensed system
 - B) Provide access as unlicensed system
 - C) A & B
 - D) None
- 5) Which of the following is considered a broadband communication channel?
- A) Fiber optics cable
 - B) Coaxial cable
 - C) Microwave circuits
 - D) All of above
- 6) Which type of routing will include the entire route in the packet header while routing?
- A) Source routing
 - B) Flooding
 - C) DSDV routing
 - D) None

- 7) The portion of satellite system is also known as.
- A) Ground segment
 - B) Air segment
 - C) Space segment
 - D) Medium Level segment
- 8) The wireless cellular networks (in public service sector) uses.
- A) Frequency Division Duplex
 - B) Code Division Duplex
 - C) Time Division Duplex
 - D) Any one
- 9) The IMTS stands for.
- A) Improved Mobile Telephone Service
 - B) Informed Mobile Telephone Service
 - C) Improved Mobile Telecom Service
 - D) Improved Mobility in Telephone Services
- 10) After upgrading AMPS with digital modulation schemes, it is referred to as.
- A) 2G
 - B) 1G
 - C) 0G
 - D) 5G

11) There are _____ Number of channels in system band 'A' of AMPS.

- A) 333
- B) 50
- C) 83
- D) 33

12) TACS stands for_____.

- A) Total Access Communication System
- B) Trial Access Communication System
- C) Telephone Access Communication System
- D) Tele Access Communication System

13) HSCSD stands for.

- A) High Speed Circuit Switched Data
- B) Heavy Speed Circuit Switched Data
- C) High Speed Current Switched Data
- D) High Speed Circuit Switched Dongle

14) The Maximum radius of piconet is.

- A) 50 m
- B) 55 m
- C) 40 m
- D) 45 m

- 15) Which one of the following is the multiple-access scheme used in GSM?
- A) Time division multiple access (TDMA)
 - B) Frequency division multiple access (FDMA)
 - C) Code division multiple access (CDMA)
 - D) Combination of TDMA and FDMA
- 16) The efficiency of a wireless system is given in which of the following units?
- A) Bits per second
 - B) Bits per second per Hertz
 - C) Bits per second per Hertz per km²
 - D) None of the above
- 17) _____ is a digital version of AMPS.
- A) GSM
 - B) D - AMPS
 - C) IS - 95
 - D) None of the above
- 18) _____ is a second - generation cellular phone system based on CDMA and DSSS.
- A) GSM
 - B) D - AMPS
 - C) IS - 95
 - D) None of the above

- 19) Microwave system take main role to delivery of high speed data.
- A) Point to multipoint
 - B) Multipoint to point
 - C) A & B
 - D) Point to point
- 20) Which of the following is considered a broadband communication channel?
- A) Fiber optics cable
 - B) Coaxial cable
 - C) Microwave circuits
 - D) All of above
- 21) The type of access used in GSM technology is.
- A) FDMA/TDMA
 - B) CDMA
 - C) OFDMA
 - D) None of the above
- 22) The coverage & capacity of CDMA system is more than that of GSM system.
- A) True
 - B) False
 - C) Equal
 - D) None of the above
- 23) The type of Access technology which can enhance the battery life is.
- A) CDMA
 - B) TDMA
 - C) OFDMA
 - D) None of the above

- 24)** The remote and sparsely populated areas will be covered by.
- A) Microcell
 - B) Macro cell
 - C) Pico cell
 - D) None of the above
- 25)** The Process of channel coding, Encryption, Multiplexing and modulation for Trans direction and reverse for reception are to be carried out by.
- A) BTS
 - B) BSC
 - C) MSC
 - D) MS
- 26)** Operation happens when the mobile moves from one cell to another.
- A) call setup
 - B) handoff
 - C) handover
 - D) all
- 27)** _____ was designed to provide mobile packet data services as an overlay system for the AMPS.
- A) HSCSD
 - B) CDMA
 - C) GPRS
 - D) CDPD
- 28)** An all IP architecture and connectivity for anyone, anywhere is provided by
- A) 2.5G
 - B) 3G
 - C) 4G
 - D) ALL

29) The 2.5G cellular system provides services like:

- A) CDPD
- B) HSCSD
- C) GPRS
- D) Both A & B

30) The Total No. of Channels in the AMPS Were.

- A) 333
- B) 433
- C) 416
- C) 383

31) The System deployed in 3G is:

- A) CDMA
- B) GSM
- C) TDMA
- D) UMTS

32) The System deployed in 2G is:

- A) UMTS
- B) CDMA2000
- C) CDMA
- D) None of the above

33) Smart antenna is an_____ technique.

- A) Mobility management
- B) Capacity expansion
- C) both
- D) RR management

34) _____ uniquely identifies a mobile telephone subscription in PSTN n/w.

- | | |
|-----------|---------|
| A) MSISDN | B) IMEI |
| C) LAI | D) MSRN |

35) _____ receives a signaling message as "initial address message" from PSTN.

- | | |
|--------|---------|
| A) MSC | B) BSC |
| C) BS | D) GMSC |

36) In GSM system which no is used during call setup operation?

- | | |
|---------|-----------|
| A) IMSI | B) MSRN |
| C) TMSI | D) MSISDN |

37) The Bluetooth specifications are provided by.

- | | |
|------------|-----------|
| A) 802.15x | B) 802.11 |
| C) 802.16 | D) 602.3 |

38) The master-slave configuration is provided by.

- | | |
|------------|------------|
| A) 802.11x | B) 802.15x |
| C) 802.16x | D) 802.2 |

39) The point to point link between piconet master and a single slave is.

- A) ACL link
- B) SCO link
- C) Both A & B
- D) None

40) AH not provides?

- A) Authentication
- B) Integrity
- C) Replay Protection
- D) Confidentiality

41) ESP provides?

- A) Authentication and Integrity
- B) Replay Protection
- C) Confidentiality
- D) All of the Above

42) Active attack involves_____?

- A) Modification of data
- B) Listening of data
- C) Both A and B
- D) None

43) Which of the following is Active Attack?

- A) Masquerade
- B) Replay
- C) Modification of message
- D) All of Above

- 44) In _____ attack one entity pretends to be different entity?
- A) Replay
 - B) Denial of service
 - C) Masquerade
 - D) None
- 45) Interruption of service attack involves?
- A) Destroying the resources of system
 - B) Making Available of Resources
 - C) Both A and B
 - D) None
- 46) WEP is stronger against which attack?
- A) Brute force
 - B) Modification
 - C) Replay
 - D) None
- 47) Important Issues to be considered while Designing MAC protocols for Sensor Network?
- A) Energy
 - B) Latency
 - C) Both Energy and Latency
 - D) None
- 48) MAC unit works with _____ to access the shared air interface?
- A) Transmitter
 - B) Receiver
 - C) Transceiver
 - D) None

49) Sensor nodes are deployed in?

- A) Physical Environment
- B) Logical Environment
- C) Both Physical and Logical Environment
- D) None

50) SPOT means?

- A) Small Programmable Object Technology
- B) Smart Programmable Object Technology
- C) Small Programmable Object Technique
- D) None

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Total No. of Pages : 12

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T.E. (Computer Science & Engineering) (Semester - V)
Examination, December - 2015
COMPUTER GRAPHICS (Revised) (Online)
Sub. Code : 66293

Day and Date : Tuesday 08 - 12 - 2015

Total Marks : 50

Time : 02.30 p.m. to 05.30 p.m.

- Instructions :**
- 1) Candidate can attempt any number of question out of which maximum of 50 marks questions will be considered.
 - 2) Figures to the right indicate full marks.
 - 3) The correct answer is to be written in the given OMR answer sheet by darkening the appropriate circle using black or blue ink or ball point pen.
 - 4) To mark the correct answers follows the instruction given on OMR sheet.
 - 5) Rough work should be done on the sheet provided at the end of question paper.
 - 6) OMR answer sheet and question paper should be handed over to supervisor after your exam.
 - 7) Only non-programmable calculators are allowed.

- 1) The transformation that changes the coordinate position of an object along a straight line path is called. **1**
 - A) Translation
 - B) Scaling
 - C) Rotation
 - D) Reflection
- 2) The equivalent representation of a two dimensional point (x,y) in the homogeneous coordinate system is _____. **1**
 - A) (x,y,1)
 - B) (x,y,0)
 - C) (x/w,y/w)
 - D) (x,y,x-y)

P.T.O.

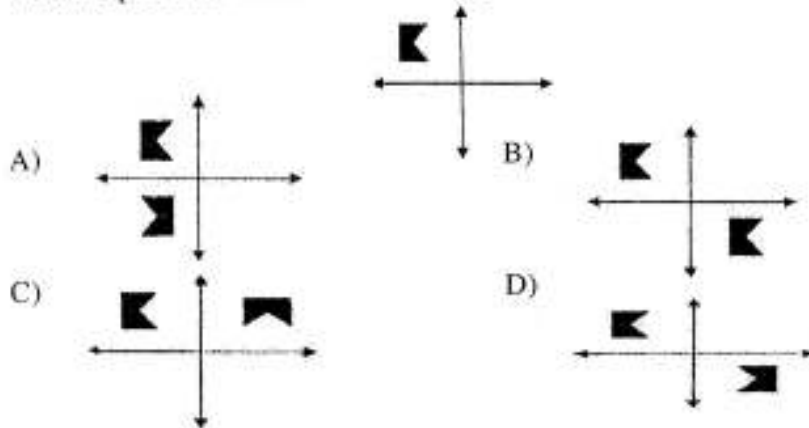
1

- 1

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- 6) In 2D two pure reflections about line passing through the origin are applied successively, the result is_____. **1**
- A) Double reflection about origin B) Pure reflection about origin
C) Pure rotation about origin D) Pure rotation along X axis
- 7) In combined transformation order of matrix multiplication is important because matrix multiplication is_____. **1**
- A) Commutative B) Noncommutative
C) Both A & B D) None of these
- 8) Affine geometry is mainly based in_____concept. **1**
- A) Transformation B) Projection
C) Parallelism D) Both A & B
- 9) When rotated through 90 Degree about the origin in a clockwise direction, the image of the point (3, 1) is **2**
- A) (-1,3) B) (3,-1)
C) (1,-3) D) (-3,1)
- 10) How many matrices are required to rotate an object about a point (x, y) **2**
- A) 2 B) 3
C) 4 D) 5

11) Which represents a translation of the figure?



12) Cavalier projection is

1

- A) An orthographic projection
- B) A perspective projection
- C) An oblique projection
- D) A multiview projection

13) Frame buffer is used to store

1

- A) Only pixels
- B) Only intensities of pixels
- C) Image definition
- D) Coordinate values of image

14) Bresenham's circle generating algorithm will take reflections of_____

1

- A) Two octets
- B) One octet
- C) Three octets
- D) None of these

15) In bresenham's circle generating algorithms, if (x,y) is the current pixel position then the x-value of the next pixel position is_____

1

- A) x
- B) x-1
- C) x+1
- D) x+2

- 16) Run length coding is used for_____.
- A) Image smoothening B) Image compression
C) Image coloring D) Image dithering
- 17) The technique of using a minimum number of intensity levels to obtain increased visual resolution is called_____.
- A) Dithering B) Halftoning
C) Depth cueing D) Rendering
- 18) In edge fill algorithm for each scan line intersecting polygon edge at $(x1, y1)$ complement all pixels whose midpoints lie to_____ of $(x1, y1)$.
- A) right B) left
C) above D) below
- 19) The seed fill algorithm assume that at least one pixel_____to the polygon.
- A) interior B) exterior
C) both A and B D) None of these
- 20) A simple seed fill algorithm for boundary defined region can developed using_____.
- A) stack B) queue
C) linked list D) None of these

- 21) The slope of the line joining the points (0,0) and (5,5) is _____ 2
- A) 0 B) 1
C) 2 D) 3
- 22) Antialiasing is a technique use _____ levels to obtain increased visual resolution. 1
- A) single intensity B) Multiple intensity
C) color intensity D) None of these
- 23) In order to prevent aliasing, a signal must be sampled at rate twice the _____ in the signal. 1
- A) Dark frequency B) Bright frequency
C) Lower frequency D) Higher frequency
- 24) In Bresenham's algorithm error term is initialized to? 2
- A) 0 B) 1
C) -1/2 D) None of above
- 25) The algorithm used for filling the interior of a polygon is called. 1
- A) Flood fill algorithm B) Boundary fill algorithm
C) Scan line polygon fill algorithm D) None of these

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- 26) If X_L , X_R , Y_B , Y_T represent the four parameters of x-left, x-right, y-bottom and y-top of the clipping window and (x,y) is a point inside the window then_____.
- A) $X_L \leq x \leq X_R$ and $Y_B \leq y \leq Y_T$
B) $X_L \leq x \leq X_R$ and $Y_B \geq y \geq Y_T$
C) $X_L \geq x \geq X_R$ and $Y_B \leq y \leq Y_T$
D) $X_L \geq x \geq X_R$ and $Y_B \geq y \geq Y_T$
- 27) If two bits are zeros and two bits are ones in a code of a subregion in Cohen-Sutherland line clipping algorithm the subregion is_____.
- A) Corner region
B) Middle region
C) Central region
D) None of these
- 28) In the Cohen-Sutherland line clipping algorithm, if the codes of the two points P and Q are 0101 and 0001 then the line segment joining the points P and Q will be _____the clipping window.
- A) Totally inside
B) Partially outside
C) Totally outside
D) None of these
- 29) A regular clipping window is_____.
- A) square
B) circular
C) rectangular
D) hexagonal

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- 30) The key to the Cohen Sutherland algorithm is always knowing that one of the end points is _____ the window. 1
- A) above B) inside
C) outside D) below
- 31) _____ is an area of display device on which the data are presented. 1
- A) viewarea B) viewport
C) viewcourt D) None of the above
- 32) _____ number of bits are used for representing each subregion of the Cohen-Sutherland line clipping algorithm. 1
- A) 1 B) 2
C) 3 D) 4
- 33) The Bezier-B-Spline approximation provides for the _____ control of curve shape. 1
- A) Local B) Global
C) Not D) None of them
- 34) Spline representations in which the degree of a spline polynomial can be set independently of the number of control points. 1
- A) B-Spline B) Beizer Spline
C) Hermite Spline D) Cardinal Spline

1

- 1

1

- 1**

1

- 1

1

- 1**

2

- 2

- 40) If $B_{i,n}(x)$ ($1 \leq i \leq n$) denotes the Bernstein polynomials of degree n then $\sum B_{i,n}(x) =$ _____ 2
- A) 0 B) 1
C) 2 D) 3
- 41) A _____ Animation consists of an automatic generation of the intermediate frames based on a set of keyframes, supplied by an animator. 1
- A) Key frame animation B) Procedural animation
C) Mesh warping D) Feature-based Image warping
- 42) A Typical animation sequence is obtained using _____ 1
- A) Object definition, Storyline, key frame specification and twining
B) Storyline, object definition, key frame specification and twining
C) Object definition, Storyline, twining and key frame specification
D) Storyline, twining, object definition and key frame specification
- 43) _____ changes, the images colors, pixel by pixel and _____ changes the shape of features in an image by shifting its pixels around. 2
- A) Warping, Cross-dissolving B) Cross-dissolving warping
C) Mapping, warping D) Cross-dissolving, mapping

1

49) Two basic technique for anti aliasing in ray tracing algorithm are 1

- A) Pixel sampling and super sampling
- B) Adaptive sampling and super sampling
- C) Pixel sampling and super sampling
- D) None of these

50) Constant-Intensity shading is also called as____. 1

- A) Gouraud shading
- B) Normal vector interpolation shading
- C) Flat shading
- D) Phong shading

XXXX

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Total No. of Pages : 8

**T.E. (Computer Science and Engg.) (Semester - VI) Examination,
December - 2015**

OBJECT ORIENTED MODELING AND DESIGN

Sub. Code : 45611

Day and Date : Friday, 04 - 12 - 2015

Total Marks : 50

Time : 04.00 p.m. to 05.00 p.m.

- Instructions : 1) All the questions carry 1 mark each.
2) Attempt any 50 questions out of 60.

- _____ is the sharing of attributes and operations among classes based on a hierarchical relationship.
a) Inheritance
b) Abstraction
c) Polymorphism
d) None of these
- The dynamic model represents the temporal, behavioural and _____ aspects of a system.
a) Functional
b) Dynamic
c) Control
d) None of these
- The object model is represented graphically with _____ containing object classes.
a) Class diagram
b) Object diagram
c) State diagram
d) None of these
- A _____ is a schema, pattern, or template for describing many possible instances of data.
a) Object diagram
b) Data flow diagram
c) Instance diagram
d) Class diagram
- _____ describes how a particular set of objects relate to each other.
a) Instance diagram
b) Object diagram
c) Class diagram
d) None of these

P.T.O.

6. _____ is a function or transformation that may be applied to or by objects in a class.
- a) Attribute
 - b) Operation
 - c) Method
 - d) None of these
7. The OMT symbol for general ternary and n-ary associations is a _____ with lines connecting to related classes.
- a) Diamond
 - b) Box
 - c) Solid ball
 - d) Triangle
8. The OMT notation for a link attribute is _____ attached to the association by a loop.
- a) Diamond
 - b) Box
 - c) Solid ball
 - d) Triangle
9. A qualifier is drawn as a _____ on the end of the association line near the class it qualifies.
- a) Diamond
 - b) Solid ball
 - c) Small box
 - d) Box
10. A _____ is a logical construct for grouping classes, associations and generalizations.
- a) Module
 - b) Model
 - c) Sheet
 - d) None of these
11. A _____ on a transition is shown as a Boolean expression in brackets following the event name.
- a) Attribute
 - b) Link
 - c) Guard condition
 - d) None of these
12. A super-state is drawn as a _____ enclosing all of its sub-states.
- a) Large rounded box
 - b) Small rounded box
 - c) Small box
 - d) Rounded box
13. If a state can accept events from more than one object, the order in which concurrent events are received may affect the final state; this is called ____.
- a) Guard condition
 - b) Race condition
 - c) Boolean condition
 - d) None of these

14. _____ consist of multiple data flow diagrams which specify the meaning of operations and constraints.
- a) Object model
 - b) Dynamic model
 - c) Functional model
 - d) None of these
15. _____ is a passive object within a data flow diagram that stores data for later access.
- a) Actor
 - b) Process
 - c) Data store
 - d) None of these
16. A data flow that generates an object used as the target of another operation is indicated by a _____ at the end of the data flow.
- a) Hollow triangle
 - b) Solid triangle
 - c) Diamond
 - d) Solid ball
17. A control flow is shown by a _____ from a process producing a Boolean value to the process being controlled.
- a) Parallel line
 - b) Dotted line
 - c) Solid line
 - d) None of these
18. A _____ is an operation that has no side effects on the externally visible state of any object.
- a) Action
 - b) Activity
 - c) Query
 - d) None of these
19. An event is a _____ transmission of information from one object to another.
- a) Two-way
 - b) One-way
 - c) One to many
 - d) None of these
20. The sequence of events and the objects exchanging events can both be shown in an augmented scenario called _____ diagram.
- a) Event diagram
 - b) State diagram
 - c) Object diagram
 - d) Event trace diagram
21. The algorithm designer must choose algorithms that minimize the cost of implementing _____.
- a) Data structures
 - b) Subsystem
 - c) Operations
 - d) Methods

22. _____ is concerned with devising a precise, concise, understandable and correct model of the real-world.
- a) Implementation
 - b) Design
 - c) Analysis
 - d) None of these
23. _____ is the high-level strategy for solving the problem and building a solution.
- a) System Architecture
 - b) System design
 - c) Object design
 - d) None of these
24. In a procedure-driven sequential system, control resides within the _____.
- a) Dispatcher
 - b) Independent objects
 - c) Program code
 - d) None of these
25. _____ is the overall organization of the system into components called subsystems.
- a) System Architecture
 - b) System design
 - c) Object design
 - d) None of these
26. The decomposition of systems into _____ may be organized as a sequence of horizontal layers or vertical partitions.
- a) Modules
 - b) Groups
 - c) Subsystems
 - d) Sheet
27. The object design phase adds internal objects for implementation and optimizes _____.
- a) Classes and associations
 - b) Data structures and algorithms
 - c) Interface and algorithms
 - d) Methods
28. During _____, the designer must rearrange the execution order for efficiency.
- a) Designing algorithms
 - b) Design optimization
 - c) Design association
 - d) Physical packaging
29. _____ is the making of context-dependent decisions.
- a) Policy
 - b) Analysis
 - c) Implementation
 - d) None of these

30. A qualified association with multiplicity "one" can be implemented as a _____.
- a) Concurrent object
 - b) Active object
 - c) Dictionary object
 - d) Passive object
31. _____ is a named property of a class that describes a range of values that instances of the property may hold.
- a) Operation
 - b) Attribute
 - c) Responsibility
 - d) None of these
32. _____ is the implementation of a service that can be requested from any object of the Class to affect behaviour.
- a) Generalization
 - b) Inheritance
 - c) Attribute
 - d) Operation
33. Graphically a _____ is rendered as a rectangle with a dog-eared corner, together with a textual or graphical comment.
- a) Note
 - b) Node
 - c) Package
 - d) Message
34. Which are the extension mechanism available in UML.
- a) Inheritance & Association
 - b) Aggregation & Association
 - c) Stereotype, Tagged values, Constraints
 - d) None of these
35. A use-case is used to structure the _____ in a model.
- a) Structural things
 - b) Behavioural things
 - c) Grouping things
 - d) Annotational things
36. Graphically, a collaboration is rendered as _____ with dashed lines, usually including only its name.
- a) Rectangle
 - b) Circle
 - c) Ellipse
 - d) None of these
37. _____ is a semantic relationship between two things in which a change to one thing may affect the semantics of the other thing.
- a) Realization
 - b) Association
 - c) Dependency
 - d) None of these

38. _____ are isomorphic, meaning that you can take one and transform it into the other.
- a) Sequence diagram
 - b) Collaboration diagram
 - c) State chart diagram
 - d) Both (a) & (b)
39. Graphically, _____ is rendered as a tabbed folder, usually including only its name and sometimes, its contents.
- a) Note
 - b) Node
 - c) Package
 - d) Message
40. Operations are get listed in _____ part of class box.
- a) First
 - b) Second
 - c) Third
 - d) None of these
41. _____ relationship between use cases means that the base use case explicitly incorporates the behaviour of another use case at a location specified in the base.
- a) Include
 - b) Extend
 - c) Generalization
 - d) Association
42. _____ is the specification of a communication among objects that conveys information with the expectation that activity will ensue.
- a) Communication
 - b) Interaction
 - c) Message
 - d) Actions
43. _____ is an interaction diagram that emphasizes the structural organization of the objects that send and receive messages.
- a) Activity Diagram
 - b) Interaction Diagram
 - c) Sequence Diagram
 - d) Collaboration Diagram
44. _____ represents the splitting of a single flow of control into two or more concurrent flows of control.
- a) Fork
 - b) Join
 - c) Swim lanes
 - d) None of these
45. _____ is the vertical dashed line that represents the existence of an object over a period of time.
- a) Swim lanes
 - b) Focus of control
 - c) Object lifeline
 - d) None of these

46. _____ is an event that represents a change in state or the satisfaction of some condition.
- a) Call event
 - b) Time event
 - c) Change event
 - d) Signal event
47. A state that has nested states is called a _____ state.
- a) Composite
 - b) Target
 - c) History
 - d) Deferred
48. _____ is a heavy weight flow that can execute concurrently with other processes.
- a) Thread
 - b) Data flow
 - c) Object flow
 - d) Process
49. _____ is the placement of a component on a node.
- a) Process
 - b) Time & space
 - c) Location
 - d) Dynamic libraries
50. _____ represents a named object that is dispatched asynchronously by one object and then received by another object.
- a) Event
 - b) Time event
 - c) Signal
 - d) None of these
51. _____ is a physical and replaceable part of system that conforms to and provides the realization of a set of interfaces.
- a) Interface
 - b) Component
 - c) File
 - d) None of these
52. An interface that a component realizes is called _____, meaning an interface that the component provides as a service to other components.
- a) Interface
 - b) Import interface
 - c) Export interface
 - d) None of these
53. To form an executable system _____ components are necessary and sufficient.
- a) Deployment
 - b) Work
 - c) Execution
 - d) None of these

54. _____ components are created as a consequence of an executing system.
- a) Deployment
 - b) Work
 - c) Execution
 - d) None of these
55. _____ stereotype specifies a component that may be executed on a node.
- a) Document
 - b) Table
 - c) Library
 - d) Executable
56. Static or dynamic object library is specified by _____ stereotype.
- a) Document
 - b) Table
 - c) Library
 - d) Executable
57. _____ is a society of classes, interfaces and other elements that work together to provide some co-operative behaviour that's bigger than the sum of all its parts:
- a) Interface
 - b) Collaboration
 - c) Behaviour
 - d) Structure
58. The dynamic flow of elements i.e. how they interact is specified by _____ part of collaborations.
- a) Structural
 - b) Behavioural
 - c) Both (a) & (b)
 - d) None of these
59. _____ is a common solution to a problem in a given context.
- a) Pattern
 - b) Mechanism
 - c) Framework
 - d) None of these
60. _____ is an architectural pattern that provides an extensible template for applications within a domain.
- a) Mechanism
 - b) Pattern
 - c) Framework
 - d) None of these



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Seat No.	
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T.E. (Computer Science & Engineering) (Part - III) (Semester - V)
Examination, December - 2015

OBJECT ORIENTED MODELING AND DESIGN (Revised) (Online)

Sub. Code : 66295

Day and Date : Saturday 12 - 12 - 2015

Total Marks : 50

Time : 03.30 p.m. to 04.30 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.
 - 3) Assume suitable data wherever necessary.

- 1) The association that can be defined in terms of other association is called as _____. [1]
A) Redundant class B) Association
C) Derived association D) None
- 2) Inheritance in object-oriented modeling can be used to. [1]
A) Generalize classes B) Specialize classes
C) Generalize and specialize classes D) Create new classes
- 3) Constraints are _____. [1]
A) Architectural relationships between entities of an object model
B) Structural relationships between entities of an object model
C) Behavioral relationships between entities of an object model
D) Functional relationships between entities of an object model
- 4) The terms inheritance, generalization and _____ all refer to aspects of the same idea and are often used interchangeably. [1]
A) Specialization B) Association
C) Aggregation D) None of these

P.T.O.

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- 5) Select best suitable option- "What is necessary for objects to group into a single class". [1]
A) Common Attributes B) Common Operations
C) Common Behavior D) Common Semantics
- 6) _____ is a semantic connection among object. [1]
A) Link B) Message
C) Object Class D) Class
- 7) A minimal set of attributes that uniquely identifies an object or link is called[1]
A) Primary key B) Candidate key
C) Super key D) Foreign key
- 8) The notation "do: A" with a state box indicate. [1]
A) Activity A B) Action A
C) State A D) Event A
- 9) _____ is the overall organization system. [1]
A) Diagram architecture B) Class architecture
C) System architecture D) Object architecture
- 10) _____ is high level strategy for solving the problem & building solution.[1]
A) Object design B) System design
C) Class design D) UML design
- 11) Specifying optimization criteria is step for constructing_____. [1]
A) Functional modeling B) Dynamic modeling
C) Object modeling D) None

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- 12) _____ is used to show that how each output value is computed from input values. [1]
- A) Event trace diagram B) Event flow diagram
C) Class diagram D) Data flow diagram
- 13) Event between groups of class without regard for sequence is shown by.[2]
- A) Event trace diagram B) Event flow diagram
C) Class diagram D) Object diagram
- 14) A _____ is a group of related function that share some common purpose such as I/O processing, Drawing picture or performing arithmetic. [2]
- A) Service B) Object
C) Attribute D) None
- 15) The first step in an object Model is, to identify relevant_____ from the application domain. [1]
- A) Abstract classes B) Super classes
C) Object classes D) Sub classes
- 16) A reference from one class to another class is_____. [1]
- A) Association B) Multiplicity
C) Operation D) Responsibility
- 17) _____ describes the role that a class in the association plays from the point of view of another class. [1]
- A) Multiplicity B) Role name
C) Constraints D) Attributes

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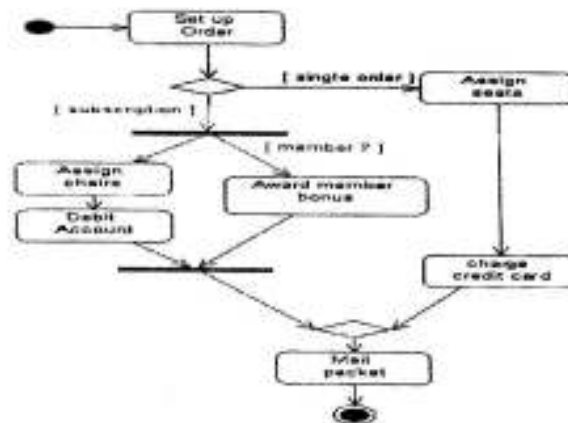
- 18) Collaboration, use case & components are _____things. [1]
A) Structural B) Behavioral
C) Grouping D) Annotational
- 19) Which thing is having Structural as well as Behavioral dimension. [1]
A) Interface B) Use case
C) Collaboration D) Active class
- 20) What realizes the interface? [1]
A) Actor B) Use case
C) States D) Components
- 21) Behavioral things are the _____ of UML model. [1]
A) Nouns B) Verbs
C) Organizational parts D) Explanatory parts
- 22) Structural things are the _____ of UML model. [1]
A) Nouns B) Verbs
C) Organizational parts D) Explanatory parts
- 23) Which is the basic object oriented building block of the UML. [1]
A) Things B) Relationship
C) Diagram D) Rules of UML
- 24) Which are the first class citizens in UML model? [2]
A) Things B) Relationship
C) Diagram D) Rules of UML

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- 25) A _____ is a set of object that share same attributes operation, relationship & semantics. [2]
A) Function B) Class
C) Structure D) Macro
- 26) An interaction is a _____ that comprises a set of messages exchanged among set of objects within a context to accomplish a purpose. [1]
A) Class B) Stereotype
C) Behavior D) Service
- 27) An actor represents a coherent set of _____ that users of use cases play when interacting with these use cases. [1]
A) Objects B) Messages
C) Classes D) Roles
- 28) An _____ relationship between use cases means that the base use case explicitly incorporates the behavior of another use case at location specified in the base. [1]
A) Include B) Exclude
C) Extend D) Uses
- 29) A _____ diagram has two features one is object lifeline and other is scope of object. [1]
A) Use case B) Activity
C) Sequence D) Collaboration
- 30) A _____ may have one incoming transition and two or more outgoing transitions each of which represents an independent flow control. [1]
A) Node B) Fork
C) Component D) Join

1

- 31) A _____ is a physical and replaceable part of the system that conforms to and provides the realization of set of interfaces. [1]
- A) Node B) Component
C) Class D) Structure
- 32) Two Events that are causally unrelated and do not affect each other are called _____. [1]
- A) Concurrent Events B) Sequential Events
C) Grouped Events D) Conditional Events
- 33) When an event causes an action to be performed without causing a state change, it is called _____. [2]
- A) Entry Action B) Exit Action
C) Internal Action D) Automatic Transition
- 34) Refer to the diagram to answer the question. What is the minimum number of threads that can be running during the execution of the activity diagram?[2]



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

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- 35) A _____ is a common solution to a problem in a given context. [1]
A) Mechanism B) Pattern
C) Framework D) None of these
- 36) A _____ is a design pattern that applies to a society of classes. [1]
A) Mechanism B) Pattern
C) Framework D) None of these
- 37) A _____ diagram shows a set of components and their relationships. [1]
A) Deployment B) Interaction
C) Activity D) Component
- 38) What types of units does component follow? [1]
A) Modular unit
B) Replaceable unit
C) Unit with well defined interface
D) All of the mentioned
- 39) Components can be represented by which of the following? [1]
A) Component symbols B) Stereotypes
C) Rectangular boxes D) A & B
- 40) What does a component diagram consists of ? [1]
A) Components, their relationship to the environment
B) Packages and dependency
C) Internal structure
D) A, C

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41) A _____ diagram is a diagram that shows the configuration of the run time processing nodes and components that live on them. [2]

- | | |
|---------------|----------------|
| A) Deployment | B) Interaction |
| C) Activity | D) Component |

42) A _____ is an architectural pattern that provides an extensible template for applications within a domain. [2]

- | | |
|--------------|------------------|
| A) Mechanism | B) Pattern |
| C) Framework | D) None of these |

XXXX