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ESE- 2019 (Prelims) - Offline Test Series Test- 6

GENERAL STUDIES AND ENGINEERING APTITUDE

SUBJECT: INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) SOLUTIONS

01. Ans: (c)

Sol: It works on technology known as collinear technology in which green and red laser beam are collimated in a single beam. Hence, (1) is false while (2) is true.

02. Ans: (c)

Sol: It is online platform where woman entrepreneurs can sell their products directly. Moreover women entrepreneurs don't have to pay any fees for selling the product online.

03. Ans: (d)

Sol: Augmented reality is super imposing information to reality, project alloy is merged reality developed by Intel, merged reality is combination of augmented reality and virtual reality. Hence, all statements are true.

04. Ans: (c)

Sol: Statement (1) is definition of RFID, it used as an alternative to the bar code in various industries.

It can be used in self-checking at libraries rental services as well as retail premises. In airport for baggage tracking and tracing.

05. Ans: (d)

Sol: It is two dimensional machine readable code made up of black and white squares and is used for storing URL's or contact information.

It does not uses any radio frequency. Hence, both statements are false.

06. Ans: (c)

Sol: IDI $\Rightarrow$ ICT development index released by United Nations International Telecommunication Union.

It is tool to measure digital information of society and to measure digital division in India.

It works with 3 stages.

Stage 1: ICT readiness ⇒ reflecting the level of networked infrastructure

Stage 2: ICT intensity ⇒ reflecting the level of use of ICTs in the society

Stage 3: ICT impact ⇒ reflecting the results/outcome of more efficient/effective of ICT uses.

07. Ans: (d)

Sol: Big-data is a term that describe the large volume of data both structured and unstructured, but its not the amount of data that's important, its what organization do with the data that matters. Big-data can be analyzed for insight that lead to better delusion and strategic business moves.

08. Ans: (b)

Sol:

- Vittiya Saksharta Abhiyan(VISAKA) emphasized upon cashless economy and appealed to faculty of higher institutions to make their respective campus cashless.
- The Union Ministry of Electronics and Information Technology (MeitY) has launched a TV channel named 'DigiShala' to promote cashless transactions. The channel was launched as part of the 'Digidhan' campaign which aims to spread awareness about digital transactions.
- E-VIN (Electronic Vaccine Intelligence Network) is an indigenously developed technology system in India that digitizes vaccine stocks and monitors the temperature of the cold chain through a smartphone application. It aims to support the Government of India's Universal Immunization Programme by providing real-time information on vaccine stocks and flows, and storage temperatures across all cold chain points in these states. It also aims to strengthen the evidence base for improved policy-making in vaccine delivery, procurement and planning for new antigens in India.

09. Ans: (c)

Sol: Artificial brain it is man-made machine that is just as intelligent creative, self-aware as human no machine has built-yet.

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10. Ans: (b)

Sol: Removing errors is also called debugging.

EEPROM is also called flash memory and example is pen drive

OCR $\rightarrow$ Image printing text

Putting magnetic film on plastic ribbon to store information is an example of magnetic tape.

11. Ans: (d)

Sol: Simplex provides one way transmission.

Hence only one node can transmit the data.

The full duplex is a both way transmission at some time, while half duplex is a both way transmission but not at the same time.

12. Ans: (d)

Sol: E- governance is about the use of ICT's in the system of governance that is, using ICT to involve multi-stakeholders in decision-making and in making government open and accountable.

E-governance on the other hand goes beyond the service delivery aspects and is seen as decisional process hence statement (2) is for E-government and statement (1) is for e-governance.

13. Ans: (c)

14. Ans: (d)

Sol: IEEE 802.11 $\rightarrow$ Wifi

IEEE 802.16 $\rightarrow$ Wimax

IEEE 802.15.1 $\rightarrow$ Bluetooth

15. Ans: (c)

Sol: If N computers are to be connected in Full Mesh topology then we need

$${}^{N}C_{2} = \frac{N(N-1)}{2} \text{ cables.}$$

16. Ans: (d)

Sol: Cryptocurrency is type of digital currency that uses cryptography for security and anti-counterfeiting measures. The use of public and private keys is done to transfer cryptocurrency between two parties. It is not issued by any central authority rendering.

It immune to government interference or manipulation.

17. Ans: (b)

Sol: Machine translation, it allows for customization by domain or profession improving output by limiting the scope of allowable substitutions.

Eg. Google translate

18. Ans: (b)

Sol: It is a computational method based on the quantum states of matter, in this type of computing the minute particle like atoms and molecules used in place of silicon. It involves processes like superimposition and entanglement which allows computing beyond barriers.

19. Ans: (d)

Sol: Public cloud which is used by normal user hence it is sharable storage private cloud is dedicated storage community cloud, which is shared by group of an organization hence dedicated sharable storage.

Hybrid cloud: When any organization uses both public and private cloud both.

20. Ans: (d)

Sol: VPN (Virtual private network) is a private connection over public network (internet) when offices are apart from each other.

21. Ans: (c)

Sol: This policy aims at facilitating creation of secure computing environment and enabling adequate trust and confidence in electronic transactions and also guiding stakeholder's action for protection of cyber space.

22. Ans: (d)

Sol: Digi-Dhan Vyapar Yojana is an initiative for small business in a bid to boost digital payments in India maintained by NPCI (National Payment Corporation of India)

23. Ans: (d)

Sol: In cable connection, optical fibre carries more data than all in fact it carries more data than wireless also.

24. Ans: (b)

Sol: BHOOMI, LOKVANI are online land registrations projects, project loan provides internet in rural areas.

25. Ans: (c)

26. Ans: (c)

27. Ans: (c)

Sol: GSM $\rightarrow$ Global system for mobile communication $\rightarrow$ 2G

GPRS $\rightarrow$ General packet radio service $\rightarrow$ 2.5 G

EDGE $\rightarrow$ Enhanced data rate for GSM evolution $\rightarrow$ 2.75 G

UMTS $\rightarrow$ Universal mobile telecommunication system $\rightarrow$ 3G

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28. Ans: (d)

Sol: Message board is basically term related to www 1.0, where it is always related readable to form.

- www 2.0 is an interactive, where it provides readable as well as writable form which is consider in blog and social profile.
- Semantic forum is another term for www 3.0.

29. Ans: (d)

Sol: At receiver site in email architecture MTA will take message from email server and deliver to user agent under IMAP or POP 3.

Internet message access protocol download and maintains copy in mail server while POP 3 (Post office protocol version 3) only download mail in hard drive.

30. Ans: (c)

Sol: Bridge operates in both physical and data link layer, it can check the destination address of a frame and decide if the frame should be forwarded or dropped.

Router: It works in network layer its job is to maintain routing table and make updations with routing protocol.

Gateway works application to session layer.

31. Ans: (d)

Sol: Statement (1) is an example of leased connection and not for dial-up connection, dial-up connection provides connection to internet through dial-up terminal connection. Statement (2) is definition of DSL connection (Digital subscriber line).

32. Ans: (d)

Sol: Viruses present in networks is always a threat. Not installing antivirus is vulnerable in system. Virus attack on not installed antivirus system is called an attack.

33. Ans: (d)

Sol: In bus topology, all computers are connected with common cable or carrier called as back bone cable.

34. Ans: (b)

Sol: Network layer takes care about addressing of packets, DATA link layer takes care of MAC address, which maintains addressing of frames.

35. Ans: (d)

Sol: Environmental Information System (ENVIS) is distributed environmental information network with mandate of collection storage, retrieval of various information about environment, All the statements above are objectives of ENVIS.

36. Ans: (b)

37. Ans: (c)

Sol: Digital signature provides methods of protections of documents which uses various property like integrity, non repudiation and authenticity and non forgeable.

38. Ans: (b)

Sol: Statement (1) is an explanation for social networking but not for social engineering.
Social engineering is basically one of the attack methods.

39. Ans: (c)

Sol: The above is definition of trojan horse.
Digital spy is not any malicious software.
Key logger captures keystroke of keyboard which is malware.
Botnet which maintains large software group to attack server.

40. Ans: (b)

41. Ans: (b)

Sol: Weighing nearly 2,650 kg, Rukmini was the first military communication satellite developed by the Indian Space Research Organisation (ISRO) for the Indian Defence forces, with the Indian Navy being the primary user. Built on September 29, 2013, Rukmini is also the last of ISRO's seven fourth-generation satellites which has at least a 2,000 nautical mile footprint over the IOR. Rukmini was launched early on August 30, 2013 atop an Ariane 5 ECA rocket from Kourou in French Guiana. This gave India a major push in maritime security.

42. Ans: (c)

Sol: CARD (Computer Aided Administration of Registration Department) project initiated by government of A.P illustrates the effective use of IT to improve citizen-government interface.

43. Ans: (b)

Sol: DFIAA: Digital finance for rural India creating awareness and access.

44. Ans: (b)

Sol: Bitcoin uses Block chain technology. The blocks are added to the block chain in a linear chronological order each node gets a copy of the block chain which gets downloaded automatically upon joining the bit coin network. Block chain has complete information about the addresses and their balances right from the generis block to the last completed block.

45. Ans: (d)

Sol: BOSS ⇒ Bharat Operating System Solutions.

It is based on Linux, which is OS. BOSS is used to narrow the gap of digital divide in India as more people in India as more people can now have access to software in their local language to use the internet and ICT facilities.

46. Ans: (b)

Sol: Application layer deals with looks and representation of data.

Internet layer deals with routing of packets and addressing of nodes.

47. Ans: (a)

Sol: 3D-printing also known as additive manufacturing it used to create 3D objects in which layers of material are formed under computer control to create an object. Stereo lithography converts liquid resins to solid form.

48. Ans: (c)

Sol: Statement (I) is definition of bionic, prosthetic limb is an important outcome of Bionics technology

Statement (II) is definition of podcast

49. Ans: (d)

Sol: Statement (I) is called organic computing it is type of computing that behaves and interacts with human in organic matter while statement (II) is true.

50. Ans: (b)

Sol: Blu-ray uses blue-laser which is blue-light instead of red light, blue-light has a shorter-wave length than red light. So, it saves more data.

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