

ESE-2019 PRELIMS TEST SERIES

Date: 013th October, 2018

GS PAPER-I (TEST-02) OBJECTIVE SOLUTION... 

ANSWERS

1. (d)	18. (d)	35. (d)	52. (d)	69. (a)	86. (a)
2. (a)	19. (c)	36. (d)	53. (a)	70. (c)	87. (a)
3. (d)	20. (a)	37. (b)	54. (a)	71. (c)	88. (d)
4. (b)	21. (c)	38. (a)	55. (b)	72. (a)	89. (a)
5. (d)	22. (c)	39. (c)	56. (a)	73. (a)	90. (a)
6. (c)	23. (c)	40. (c)	57. (a)	74. (d)	91. (c)
7. (d)	24. (c)	41. (a)	58. (c)	75. (c)	92. (c)
8. (a)	25. (a)	42. (c)	59. (a)	76. (d)	93. (d)
9. (d)	26. (a)	43. (c)	60. (a)	77. (c)	94. (a)
10. (b)	27. (c)	44. (d)	61. (a)	78. (c)	95. (d)
11. (a)	28. (a)	45. (b)	62. (d)	79. (a)	96. (d)
12. (c)	29. (c)	46. (d)	63. (b)	80. (a)	97. (c)
13. (a)	30. (b)	47. (a)	64. (c)	81. (d)	98. (b)
14. (c)	31. (d)	48. (c)	65. (b)	82. (a)	99. (d)
15. (d)	32. (a)	49. (c)	66. (c)	83. (d)	100. (c)
16. (b)	33. (a)	50. (b)	67. (c)	84. (c)	
17. (a)	34. (a)	51. (a)	68. (a)	85. (c)	

1. (d)

HADES is developed by the US scientists. It rather than blocking an intruder deploys an alternative reality – feeding hacker with false data.

2. (a)

Haptic communication is a branch of nonverbal communication that refers to the ways in which people and animals communicate and interact via the sense of touch.

3. (d)

Worm: Malware that replicates itself so it can spread to infiltrate other computers.

Crypto-miners: Crypto-miners are tools that “mine” or generate, new units of a crypto currency. Crypto-mining isn’t itself malicious by nature. But bad actors are abusing it for nefarious purposes. They are doing it by illegally accessing important business assets such as servers used for electronic medical record (EMR) systems or the back-ends for corporate websites and installing crypto-currency miners in them. This slows down business processes and drives up the organization’s electricity consumption.

Phishing: Method used by criminals to try to obtain financial or other confidential information (including user names and passwords) from internet users, usually by sending emails.

Keyboard Logger: It’s a virus or physical device that logs keystrokes to secretly capture private information such as passwords or credit card details.

4. (b)

SARAS PT1N (14 seater) designed and developed by CSIR-National Aerospace Laboratories (CSIR-NAL), a frontline aerospace research laboratory, has successfully made its maiden flight in January 2018.

5. (d)

INSATs are geostationary satellites used for Communication as well as Earth Observation purposes. INSAT-3D, Kalpana, INSAT 3A and INSAT -3DR are for Earth Observation purpose whereas INSAT-3A, 3C, 4A, 4B, 4CR were for communication purposes.

6. (c)

The Mission envisages empowering our national academic and R&D institutions spread over the country by installing a vast supercomputing grid comprising of more than 70 high-performance computing facilities. These supercomputers will also be networked on the National Supercomputing grid over the National Knowledge Network (NKN).

Academic and R&D institutions as well as key user departments/ministries would participate by using these facilities and develop applications of national relevance. The Mission also includes development of highly professional High Performance Computing (HPC) aware human resource for meeting challenges of development of these applications.

The Mission implementation would bring supercomputing within the reach of the large Scientific & Technology community in the country and enable the country with a capacity of solving multi-disciplinary grand challenge problems.

The Mission would be implemented and steered jointly by the Department of Science and Technology (DST) and Department of Electronics and Information Technology (DeitY).

7. (d)

Adopting engineering and technology as the vehicle to addressing the societal needs and achieving national prosperity, MHRD has drafted a new and catalytic scheme called IMPacting Research INnovation and Technology or IMPRINT. IMPRINT is a first-of- its-kind Pan-IIT and IISc joint initiative to develop a (a) New Education Policy, and (b) Roadmap for Research to solve major engineering and technology challenges in selected domains needed by the country.

The ten domains represent the most important areas relevant to our country in order to enable, empower and embolden the nation for inclusive growth and self-reliance. The first phase of IMPRINT is dedicated to creating a **policy document** defining the scope, strategy and mandate for pursuing engineering challenges in the country and not developing a specific technological product or process.

The real engineering pursuit will ensue in the second phase.

8. (a)

5G is the next generation of mobile networking technology following 4G. Much like every generation before it, 5G aims to make mobile communication faster, more reliable and more devices go online.

Standards for 5G aren't solidified yet and service providers won't necessarily use the exact same technology to implement 5G, so it is hard to say when it will be launched.

9. (d)

Cloud computing is the delivery of computing services—servers, storage, databases, networking, software, analytics and more—over the Internet (“the cloud”). Companies offering these computing services are called cloud providers and typically charge for cloud computing services based on usage.

Few things one can do with the cloud: Create new apps and services; Store, back up and recover data; Host websites and blogs; Stream audio and video; Deliver software on demand; Analyse data for patterns and make predictions.

10. (b)

Net neutrality is the principle that Internet service providers treat all data on the Internet the same and not discriminate or charge differently by user, content, website, platform, application, type of attached equipment, or method of communication.

11. (a)

In its attempt to hasten financial inclusion across the country, the RBI in 2011 declared to allow all non-banking entities to set up and operate their own automated teller machines (ATMs) known as White Label ATM's .

12. (c)

13. (a)

As part of the “Ease of Doing Business” initiatives, the Central Board of Excise & Customs, Government of India has taken up implementation of the Single Window Project to facilitate the Trading across Borders in India.

The 'India Customs Single Window' would allow importers and exporters, the facility to lodge their clearance documents online at a single point only.

The Single Window Interface for Trade (SWIFT), would reduce interface with Governmental agencies, dwell time and the cost of doing

business.

14. (c)

15. (d)

The acronym “NEFT” stands for National Electronic Funds Transfer. It is an online system for transferring funds from one financial institution to another within India. The acronym “RTGS” Stand For ‘Real Time Gross Settlement’. RTGS is a funds transfer system where money is moved from one bank to another in ‘real-time’, and on gross basis. NEFT is based on Net settlement, whereas RTGS is based on Gross settlement. There is no maximum limit on NEFT and RTGS, whereas minimum Limit on RTGS is 2 Lakhs.

16. (b)

Unlike paytm, BHIM is not a digital wallet. It is a payment application which allows users to transfer money from one bank account to another without requiring the Bank account and IFSC code.

17. (a)

18. (d)

19. (c)

20. (a)

The **Internet Protocol (IP)** is the principal communications protocol in the Internet protocol suite for relaying packets across network boundaries.

21. (c)

In computing, a firewall is a network security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules. A firewall typically establishes a barrier between a trusted internal network and untrusted external network.

22. (c)

0	4	8	16	19	31
Version	IHL	Type of Service	Total Length		
Identification		Flags	Ragment Offset		
Time to Live		Protocol	Header Checksum		
Source IP Address					
Destination IP Address					
Options				Padding	

23. (c)

24. (c)

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E-RaKAM, is a platform, which allows farmers to sell agricultural produce.

The portal is a joint initiative by state-run-auctioneer MSTC and Central Warehousing Corporation arm CRWC.

25. (a)

Freeware is software whose source code is publically available.

26. (a)

BOSS software is developed on Linux platform by C-DAC to promote the usage of Free/ open source software in India.

27. (c)

Ransomware is a subset of malware in which the data on a victim's computer is locked, typically by encryption, and payment is demanded before the ransomed data is decrypted and access returned to the victim.

The motive for ransomware attacks is nearly always monetary, and unlike other types of attacks, the victim is usually notified that an exploit has occurred and is given instructions for how to recover from the attack. Payment is often demanded in a virtual currency, such as bitcoin, so that the cybercriminal's identity isn't known.

28. (a)

The ICT Development Index (IDI) is an index published by the United Nations International Telecommunication Union based on internationally agreed information and communication technologies (ICT) indicators.

This makes it a valuable tool for benchmarking the most important indicators for measuring the information society. In 2017, Iceland secured Rank 1 in IDI.

29. (c)

TRI-NETRA stands for - Terrain imaging for diesel dRivers INfra-red, Enhanced optical & Radar Assisted.

TRI-NETRA system shall be made up of high-resolution optical video camera, high sensitivity infra-red video camera and additionally a radar-based terrain mapping system.

TRI-NETRA is designed to "see" the terrain ahead of the running locomotive during inclement weather

by combining the images captured by the three sub-systems and to create a composite video image which shall be displayed in front of the Loco Pilot on a computer monitor.

30. (b)

Both the statements are correct. A blockchain, originally block chain, is a continuously growing list of records, called blocks, which are linked and secured using cryptography. For use as a distributed ledger, a blockchain is typically managed by a peer-to-peer network collectively adhering to a protocol for inter-node communication.

31. (d)

32. (a)

National Agriculture Market or eNAM is an online trading platform for agricultural commodities in India. The market facilitates farmers, traders and buyers with online trading in commodities. Over 90 commodities including staple food grains, vegetables and fruits are currently listed in its list of commodities available for trade.

An e-NAM mobile application is available in 8 languages on **Android** for farmers and traders to bid and complete a transaction on the app.

33. (a)

NIKSHAY- A web based solution for monitoring of TB patients to monitor Revised National Tuberculosis Programme (RNTCP) effectively, a web enabled and case based monitoring application called NIKSHAY has been developed by National Informatics Centre (NIC).

34. (a)

The m-KRISHI initiative offers personalised and integrated services in local languages to farmers on their mobile phones. The service aims to enable farmers in remote areas to connect to their stakeholders, access good quality agricultural inputs and find advice on farming practices. However m-KRISHI is developed by MPEDA and TCS.

35. (d)

The MICR code has nine digits in it with each three digits signifying some important information about the transaction and the bank. The first three digits in the MICR code represent the city code. The next three digits stand for the bank code

while the last three digits represent the bank branch code. MICR code is generally made up of Iron Oxide.

36. (d)

37. (b)

The government offers 1 GB space for storage in DigiLocker.

38. (a)

E-Way Bill is the short form of Electronic Bill. It is a unique document/bill, which is electronically generated for the specific consignment/movement of goods from one place to another, either inter-state or intra-state and of value more than INR 50,000, required under the current GST regime.

39. (c)

40. (c)

The NASA-ISRO Synthetic Aperture Radar (NISAR) mission is a joint project between NASA and ISRO to co-develop and launch a dual frequency synthetic aperture radar satellite. The satellite will be the first radar imaging satellite to use dual frequency and it is planned to be used for remote sensing to observe and understand natural processes on Earth

41. (a)

Sagar Vani is an integrated information dissemination system that will serve the coastal community, especially the fishermen community with the advisories and alerts towards their livelihood.

42. (c)

43. (c)

44. (d)

To reduce congestion at toll gates on national highways, the government has launched a mobile application through which highway users can buy FASTags (radio frequency identification or RFID cards). The cards would be delivered to the users' doorsteps within 24 hours.

Radio-Frequency Identification (RFID) is the use of radio waves to read and capture information stored on a tag attached to an object. A tag can be read from up to several feet away and does not need to be within direct line-of-sight of the reader to be tracked

45. (b)

Statement 1 and 2 are correct and Statement 3 is incorrect. Quantum dots produce light by themselves so they need no backlight, making them much more energy efficient.

46. (d)

Assisted GPS is a system that often significantly improves the start-up performance—i.e., time-to-first-fix (TTFF)—of a GPS satellite-based positioning system. A-GPS is extensively used with GPS-capable cellular phones, as its development was accelerated by the U.S.

47. (a)

RBI in 2014 issued the draft guidelines for the implementation of BBPS.

48. (c)

Holographic data storage records information throughout the volume of the medium and is capable of recording multiple images in the same area utilizing light at different angles.

Also, whereas magnetic and optical data storage records information a bit at a time in a linear fashion, holographic storage is capable of recording and reading millions of bits in parallel, enabling data transfer rates greater than those attained by traditional optical storage.

49. (c)

Cyber-squatting is registering, selling or using a domain name with the intent of profiting from the goodwill of someone else's trademark.

Typo squatting, also called URL hijacking, a sting site, or a fake URL, is a form of cyber squatting, and possibly brand-jacking which relies on mistakes such as typos made by Internet users when inputting a website address into a web browser.

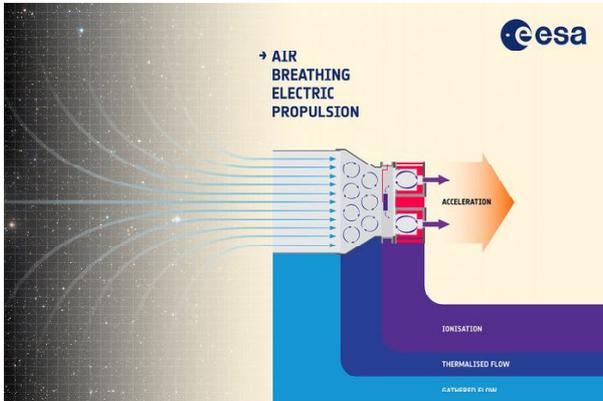
50. (b)

Intel has unveiled Project Alloy, a device that creates merged reality. Merged reality is a new way of experiencing Virtual world and real world together. Six degrees of freedom (6DoF) refers to the freedom of movement of a rigid body in three-dimensional space. Specifically, the body is free to move forward/backward, up/down, left/right (translation in three perpendicular axes) combined with rotation about three perpendicular axes

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51. (a)

World-first, an ESA-led team has built and fired an electric thruster to ingest scarce air molecules from the top of the atmosphere for propellant, opening the way to satellites flying in very low orbits for years in the end.



52. (d)

Kerala government has recently launched first of its kind, e- health program to create electronic health records of a population in Thiruvananthapuram. It will provide a centralized data base of health information.

53. (a)

Bharat QR code is a single unified QR code capable of accepting payments from Visa, MasterCard, RuPay Cards for wider acceptance. Customer can easily make payments through Bharat QR code and does not require carrying physical Debit or Credit card.

54. (a)

55. (b)

56. (a)

Gorilla Glass is a new glass solution that raises the bar for protection against drops higher than ever, surviving 1.6-meter, shoulder-height drops onto hard, rough surfaces up to 80% of the time. That's up to 4X better in drop failure height than competitive glasses.

57. (a)

USSD (Unstructured Supplementary Service Data) is a Global System for Mobile (GSM) communication technology that is used to send text between a mobile phone and an application program in the network.

58. (c)

This service allows mobile banking transactions using basic feature mobile phone, there is no need to have mobile internet data facility for using USSD based mobile banking.

Even though DDUGJY has completed its target (10 percent of rural house hold to have electricity connection), not every rural house is electrified.

59. (a)

As part of the "Digital India" agenda of the Government, it is envisaged to develop the Electronics System Design and Manufacturing (ESDM) sector to achieve "Net Zero Imports" by 2020.

Setting up of Electronic Development Fund (EDF) is one of the important strategies which would enable creating a vibrant ecosystem of innovation, research and development (R&D) and with active industry involvement.

60. (a)

61. (a)

62. (d)

National Agriculture Market or e-NAM is an online trading platform for agricultural commodities in India. The market facilitates farmers, traders and buyers with online trading in commodities.

63. (b)

Android Things (codenamed Brillo) is an Android-based embedded operating system platform by Google, announced at Google I/O 2015. It is aimed to be used with low-power and memory constrained Internet of Things (IoT) devices, which are usually built from different MCU platforms.

64. (c)

65. (b)

The Indian Institute of Technology (IIT)-Delhi has installed Massive Multiple-Input, Multiple-Output (MIMO) lab on campus for standardisation, R&D and manufacturing of 5 G equipments.

Massive Multiple-Input Multiple-Output (MIMO) technology will help curb the emittance of radiation harmful to our health and also will allow less radio interference for better communication.

66. (c)

67. (c)
68. (a)
It involves documentation of the knowledge from existing literature related to Ayurveda, Unani, and Siddha in digital format in 5 international languages which are English, French, German, Spanish and Japanese.
69. (a)
SRAM does not need periodic refreshment to maintain data while DRAM needs periodic refreshment to maintain the charge in the capacitors for data.
70. (c)
Bhoomi Project: Online delivery of Land Records. It is a self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka.
Gyandoot: It is an Intranet-based Government to Citizen (G2C) service delivery initiative. It was initiated in the Dhar district of Madhya Pradesh in January 2000 with the twin objective of providing relevant information to the rural population and acting as an interface between the district administration and the people.
Lokvani Project in Uttar Pradesh: Lokvani is a public-private partnership project at Sitapur District in Uttar Pradesh which was initiated in November, 2004. Its objective is to provide a single window, self-sustainable e-Governance solution with regard to handling of grievances, land record maintenance and providing a mixture of essential services.
71. (c)
Unnat Jeevan by Affordable LEDs and Appliances for All (UJALA), also known as Unnat Jyoti by Affordable LEDs for All, was launched by Prime Minister of India Narendra Modi on 1 May 2015, replacing the "Bachat Lamp Yojana".
72. (a)
73. (a)
Remote sensing is used in numerous fields, including geography, land surveying and most Earth Science disciplines (for example, hydrology, ecology, oceanography, glaciology, geology); it also has military, intelligence, commercial, economic, planning and humanitarian applications.
74. (d)
Geostationary orbit is located approximately 36000 km above the earth's surface. Geostationary satellite remains exactly above the earth's equator all the time for this it should follow a non-inclined orbit.
75. (c)
It is a mission of ISRO and not DRDO. Earlier it was decided that ISRO will develop the orbiter and rover while Russian Federal Space Agency (Roskosmos) will provide the lander. But now India will develop lunar orbiter, a lander and a lunar rover by itself.
Chandrayaan-2 will be launched by a Geosynchronous Satellite Launch Vehicle (GSLV) using Cryogenic Engine.
76. (d)
The NAVIC system is constellation of seven satellites, of which three are geostationary and four are geosynchronous. It provides location tracking within 20 meters of actual positions, especially in 1,500 km area around the country's borders. The NAVIC navigation system has both civilian and military uses. Moreover, it helps not just in land navigation but also in marine and aerial navigation.
77. (c)
GAGAN Payload is already operational through GSAT-8 and GSAT-10 satellites. The third GAGAN payload will be carried onboard GSAT-15 satellite which is scheduled for launch this year in 2018. The Indian Space Research Organization (ISRO) and Airports Authority of India (AAI) have implemented the GPS Aided Geo Augmented Navigation-GAGAN project as a Satellite Based Augmentation System (SBAS) for the Indian Airspace. GAGAN is the first SBAS system in the world to serve the equatorial region.
78. (c)
BeiDou is from China.
79. (a)
Radar cross section is defined as the ratio of scattered power in a given direction to the power incident on it. The power incident is the energy radiated by the transmitting antenna of the radar.

80. (a)

Organic computing is computing that behaves and interacts with humans in an organic manner. The term "organic" is used to describe the system's behavior, and does not imply that they are constructed from organic materials.

81. (d)

AI is to make things work automatically through machine without using human effort. Machine will give the result with just giving input from human. That means the system or machine will act as per the requirement.

Transport- Driver less trains and metros are already in use. There are also self driving car available in the market today.

Banking- Banks use artificial intelligence systems to organize operations invest in stocks and manage properties

Use in security, both at the national and at the individual level.

82. (a)

Crypto Currency uses block-chain technology. These currencies are not regulated by central monetary authority (RBI).

83. (d)

ICT promotes centralized storage of data and files thus reduce the time delay in unnecessary processing caused by multiple levels in the department/organization. It also improves decision making and planning through its various tools like Geographic information system and management information system.

ICT tools like radio, mobile, internet, and website have increased openness, transparency accountability and which has led to government providing high quality service delivery.

84. (c)

As human interaction is reduced and most of the decisions are taken by machine and network, emotional quotient or say emotional intelligence of the administrator has no role to play. Since most of the office work is now smoothly being done by computers it may also lead to reduction in employment.

85. (c)

A point of sale (PoS) is the place where sales are made. On macro level it may be a mall or market or a city and on Micro level, a PoS may be a area where a customer completes a transaction, such as checkout counters.

86. (a)

The right information at the right time can empower marginalized women and protect them from several challenges. A number of ICT tools such as radio, television, mobile phone and the internet are used to empower women about awareness, education and information, as this knowledge can create more opportunities.

In our Information and Communications Technology (ICT) era, half of women are suffering due to the gap between ICT and its use without needs assessment and participation of women living in poor communities.

87. (a)

When ICT is applied to medical and healthcare facilities it can help in reducing the price of healthcare facilities. It can give the direct access of the medical case history, checking the treatment online and keeping track on the patients' progress and anticipating possible medical errors.

88. (d)

GPS technology has a wide range of uses and can be found using in almost any industry sector. They can be used to map forests, help farmers harvest their fields, and navigate airplanes on the ground or in the air. GPS systems are used in military applications and by emergency crews to locate people in need of assistance.

89. (a)

Paytm has introduced a new toll-free number- 1800 1800 1234 which enables non-internet and feature phone users to make or receive payments without internet.

90. (a)

91. (c)

92. (c)

Dot matrix printers are type of impact printer where a print head (made up of a matrix of pins) presses against an inked ribbon.

93. (d)

94. (a)
It is type of computer printer which requires heat to make colored images onto materials like ID cards, clothing, paper etc.
95. (d)
3D printing has many applications. In manufacturing, medicine, architecture, and custom art and design. Some people use 3D printers to create more 3D printers. In the current scenario, 3D printing process has been used in manufacturing, medical, industry and socio-cultural sectors which facilitate.
96. (d)
Application software is a program designed for end users. E.g. database program, word processor, web browsers, image editor etc.
97. (c)
The Gaganyaan mission, is a "Human Space Flight Project" to be completed by 2022. If successful, India will become fourth nation in the world to send astronaut into space after US, Russia and China.
98. (b)
QR code is 2D code.
99. (d)
Software piracy is the downloading pirate versions of software over the Internet. The copying of software for use on more than one machine when the license is for single usage is software counterfeiting.
100. (c)
Statement 1 says that it is a means to effective and efficient learning due to its ease of access and the pace being determined by the learner.