# MADE EASY

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**Test Centres:** Delhi, Hyderabad, Bhopal, Jaipur, Pune, Kolkata

## ESE 2024 : Prelims Exam
CLASSROOM TEST SERIES

## GS & ENGINEERING APTITUDE

### Test 15

**Section A :** Current Issues of National and International Importance Relating to Social, Economic & Industrial Development **[All Topics]**

**Section B :** Standards & Quality practices in Production, Construction, Maintenance & Services **[All Topics]**

**Section C :** Information and Communication Technologies (ICT) **[All Topics]**

| ANSWER KEY | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1.** | (d) | **11.** | (a) | **21.** | (d) | **31.** | (a) | **41.** | (a) |
| **2.** | (c) | **12.** | (c) | **22.** | (b) | **32.** | (a) | **42.** | (a) |
| **3.** | (c) | **13.** | (d) | **23.** | (a) | **33.** | (c) | **43.** | (a) |
| **4.** | (c) | **14.** | (d) | **24.** | (b) | **34.** | (c) | **44.** | (d) |
| **5.** | (d) | **15.** | (d) | **25.** | (b) | **35.** | (d) | **45.** | (d) |
| **6.** | (b) | **16.** | (c) | **26.** | (d) | **36.** | (a) | **46.** | (d) |
| **7.** | (a) | **17.** | (a) | **27.** | (a) | **37.** | (b) | **47.** | (c) |
| **8.** | (b) | **18.** | (a) | **28.** | (b) | **38.** | (d) | **48.** | (b) |
| **9.** | (d) | **19.** | (b) | **29.** | (a) | **39.** | (d) | **49.** | (a) |
| **10.** | (c) | **20.** | (d) | **30.** | (a) | **40.** | (a) | **50.** | (c) |

## DETAILED EXPLANATIONS

**2.**   **(c)**

Every decision of the Goods and Services Tax Council shall be taken at a meeting, by a majority of not less than three-fourths of the weighted votes of the members present and voting, in accordance with the following principles, namely: — The vote of the Central Government shall have a weightage of one third of the total votes cast, and the votes of all the State Governments taken together shall have a weightage of two-thirds of the total votes cast, in that meeting.

**3.**   **(c)**

Increasing the rate of interest on savings and fixed deposits attracts people to park their money in the banks, which in turn helps to reduce inflation

**4.**   **(c)**

Comprehensive development of villages of blocks on northern border thus improving the quality of life of people living in identified border villages. This will help in encouraging people to stay in their native locations in border areas and reversing the outmigration from these villages adding to improved security of the border.

**5.**   **(d)**

The Maternity Benefit (Amendment) Act, 2017 amended Section 5 of the erstwhile Act to allow 26 weeks of paid leave after childbirth, although only to biological mothers. The amendment also inserted Section 5(4) which said that adoptive or surrogate mothers legally adopting a child below three months will be entitled to a maternity benefit period of 12 weeks from the date the child is handed over to the mother.

**6.**   **(b)**

PMSSY was announced in 2003 with objectives of correcting regional imbalances in the availability of affordable/ reliable tertiary healthcare services and also to augment facilities for quality medical education in the country

**7.**   **(a)**

The League makes decisions on a majority basis, but there is no mechanism to compel members to comply with resolutions. The Arab League, formally known as the League of Arab States, was established in 1945 with initially just six nations: Egypt, Iraq, Jordan, Lebanon, Saudi Arabia, and Syria. Currently, it has 22 member states, who have pledged to cooperate on economic and military affairs, among other issues. Iran is not a member of Arab League.

**8.**   **(b)**

- Know India Programme of the Ministry of External Affairs is a three-week orientation programme for diaspora youth conducted with a view to promote awareness on different facets of life in India and the progress made by the country in various fields e.g. economic, industrial, education, science & technology, communication & information Technology, culture.
- KIP provide a unique forum for students & young professionals of Indian origin to visit India, share their views, expectations & experiences and to develop closer bonds with the contemporary India.

**10. (c)**

- The G20 or the Group of Twenty comprises 19 countries (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, and the United States) and the European Union.

- These members represent around 85 per cent of the global GDP, over 75 per cent of global trade, and about two-thirds of the world population. As a forum for international economic cooperation, it plays an important role in shaping and strengthening global architecture and governance on all major international economic issues.

- Unlike the UN, G20 does not have a permanent secretariat or staff. Rather, the G20 Presidency rotates annually among the members – the Presidency is responsible for bringing together the G20 agenda, organising its workings and hosting summits. India holds the Presidency from December 1, 2022, to November 30, 2023.

**12. (c)**

The Pradhan Mantri Jan Arogya Yojana (PMJAY) falls under Ayushman Bharat. PM-JAY is the largest health assurance scheme in the world which aims at providing a health cover of Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization to over 10.74 crores poor and vulnerable families (approximately 50 crore beneficiaries) that form the bottom 40% of the Indian population. The households included are based on the deprivation and occupational criteria of Socio-Economic Caste Census 2011 (SECC 2011) for rural and urban areas respectively.

**16. (c)**

World Trade Organization (WTO) is a member-driven, consensus-based intergovernmental organisation that regulates and facilitates international trade between nations. It officially began operations on January 1, 1995, in accordance with the 1994 Marrakesh Agreement. WTO's Agreement on TRIPS promotes IP rights enforcement.

**18. (a)**

- Generative AI (GenAI) is a type of Artificial Intelligence that can create a wide variety of data, such as images, videos, audio, text, and 3D models. It does this by learning patterns from existing data, then using this knowledge to generate new and unique outputs.

- The most famous generative AI application is ChatGPT, a chatbot that Microsoft-backed OpenAI released late last year.

**19. (b)**

- **Five Eyes Alliance:** The Five Eyes Alliance refers to an intelligence-sharing partnership among five countries: the United States, the United Kingdom, Australia, Canada, and New Zealand. These nations collaborate closely on intelligence matters, sharing information to protect their shared national interests.

- The alliance traces its origins back to World War II when the UK and the US decided to share intelligence after successfully breaking German and Japanese codes.

**21.    (d)**

Darjeeling Tea, called the 'Champagne of Teas', was the first Indian product to get the GI (Geographical Identification) tag in 2004 for its distinctive aroma and flavor

**22.    (b)**

- ISRO Chairman S. Somanath, golfer Aditi Ashok, and retired Supreme Court judge V. Gopala Gowda are among the 68 people and 10 organisations selected for the Rajyotsava Award - 2023 by the Karnataka government for their contributions in different fields.
- The Rajyotsava Award is the state's second-highest civilian award given by the Karnataka government annually to prominent writers, social workers and others.

**23.    (a)**

- The United Kingdom (U.K.) hosted the first Artificial Intelligence (AI) Safety Summit. Over 27 countries including India and China along with the US, UK and EU, signed the Bletchley Declaration, vowing to develop AI in a human-centric manner
- The Bletchley Declaration represents a "world-first" accord, designed to tackle the myriad of safety concerns associated with advanced AI models, particularly those developed by major entities like OpenAI, Google and Microsoft.

**26.    (d)**

| Traditional concept | Modern concept |
| --- | --- |
| • Low quality is due to poor working of people. | • Low quality is due to poor labour management. |
| • Quality depends only on the production. | • Quality depends on all phases of the production process from the design till the delivery and after sales services. |
| • Some minor defects and deviations are acceptable. | • The goal is to have defects free products and services. |
| • The quality control department is a separate unit, checking the finished product. | • Quality is everyone's business. Its total control includes all production phases. |

**27.    (a)**

Genichi Taguchi makes contribution to "Quality loss function" and "Robust design by design of experiment".

**28.    (b)**

Design of Experiments (DOE) is an active method of quality control, whereas statistical process control is a passive method of quality control.

**29.    (a)**

Acceptance sampling gives no idea about the process that is used in order to produce the items.

**30.    (a)**

For a single sampling plan:
$$\text{ATI} = n + (1 - P_a)(N - n)$$

**31.** **(a)**

TQM works equally well in both service and manufacturing sectors.

There are many obstacles during the implementation of TQM, such as:

1. Lack of strategic planning related to changes necessary for various planning, processes and products.
2. Poor customer focus.
3. Lack of communication among intra-departments of a company.
4. Lack of employee empowerment in organisation.
5. More emphasis given to financial results in short-term.
6. Internal politics existing in the organisation.
7. Lack of strong motivation in employees.
8. Lack of commitment from top management.

**32.** **(a)**

**ISO 19011 : 2011 :**

- It provides guidance on auditing management systems, including the principles of auditing, management system audits.
- It also provides guidance on the evaluation of competence of individual involved in the audit process, including person managing the audit programme, auditors and audit term.

**33.** **(c)**

Six-sigma is a top-down solution to help organizations, it emphasizes leadership involvement and strategic alignment throughout an organization.

**34.** **(c)**

Limitation of line balancing:

Line balancing results in reduction in work-in-process invertory.

**35.** **(d)**

- The liquid penetrant testing uses very low viscosity (highly fluid) liquid, which is applied to the surface of a part, it will penetrate into fissures and voids open to the surface.
- On porous materials, it can give misleading indications.

**36.** **(a)**

Dimensions of service quality are:

(i) Tangibles (least important dimension)
(ii) Reliability
(iii) Responsiveness
(iv) Empathy
(v) Assurance

**37.** **(b)**
- Statement 1 is correct for reliability.
- Availability is the ability of an item, to be in a state to perform required functions at any instant of time or during a stated interval of time assuming the required external resources are provided.

**39.** **(d)**
- Voice over Internet Protocol (VoIP), is a technology that allows to make voice calls using a Internet connection instead of a regular (or analog) phone line.
- A URL (Uniform Resource Locator) is a unique identifier used to locate a resource on the Internet. It is also referred to as a web address.
- UTP cables are used as ethernet cables and telephone wires for short to medium distances to transfer data and audio signals.

**40.** **(a)**
A computer virus is software usually hidden within another seemingly harmless programme that can produce copies of itself and insert them into other programs or files, and that usually performs a harmful action (such as destroying data).

**41.** **(a)**
The fastest type of memory is the CPU Registers, which are located within the CPU itself and provide the CPU with quick access to frequently used data. Next in terms of speed is Cache Memory, which is a small amount of high-speed memory located close to the CPU.

**42.** **(a)**
The process of copying files to a CD-ROM is called "burning" because a laser in the CD-R drive uses heat to record the data on the disc.

**43.** **(a)**
Bharat Net Project is being implemented by the Department of Telecommunications under the Ministry of Communications.

**44.** **(d)**
Prime Minister's Wi-Fi Access Network Interface (PM-WANI) was launched by Department of Telecommunications (DoT) to proliferate Broadband through Public Wi-Fi networks. The PM-WANI framework envisages provision of Broadband through Public Wi-Fi Hotspot providers. It consist of elements such as Public Data Office (PDO), Public Data Office Aggregator (PDOA), App Provider and Central Registry.

**47.** **(c)**
A hyperlink in Word is an electronic link to a hypertext file, website, recording or document that's outside the document you're writing.

**48.** **(b)**

- Bluetooth is a short-range wireless technology standard that is used for exchanging data between fixed and mobile devices over short distances and building personal area networks (PANs).
- The protocol operates in the license-free ISM band at 2.402–2.480 GHz. To avoid interfering with other protocols that use the 2.45 GHz band, the Bluetooth protocol divides the band into 79 channels (each 1 MHz wide) and changes channels, generally 1600 times per second. Bluetooth divides transmitted data into packets, and transmits each packet on one of 79 designated Bluetooth channels.

**50.** **(c)**

The motto of the Digital India Mission is 'Power to Empower'. Digital India was an initiative taken by the Government of India for providing high-speed internet networks to rural areas. There are three core components to the Digital India initiative. They are digital infrastructure creation, digital delivery of services, and digital literacy.

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