

MAH B.P.Ed CET — Complete Sample Paper

Sample Paper — 6

Duration: 60 Minutes

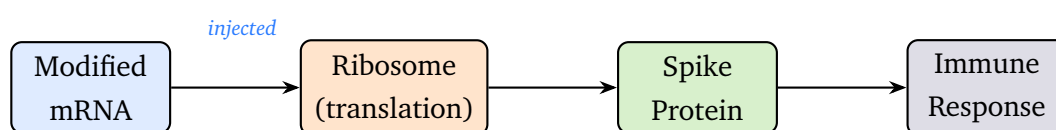
Maximum Marks: 50

Instructions

- This paper contains **50 Multiple Choice Questions** modelled on the MAH B.P.Ed CET written test pattern.
- **Part A:** General Knowledge (Q1–Q15) | **Part B:** Mental Ability (Q16–Q30) | **Part C:** Teacher Aptitude & Sports Related Knowledge (Q31–Q50).
- Each correct answer carries **+1 mark**. There is **no negative marking**.
- Only **one** option is correct per question.
- No sectional time limit; total time: **60 minutes**.
- Mobile phones, calculators, and electronic gadgets are strictly prohibited.

PART A: General Knowledge (Q1–Q15)

Q1. The Nobel Prize in Physiology or Medicine 2023 was awarded to Katalin Karikó and Drew Weissman for their discoveries concerning nucleoside modifications. Which process below best represents the basis of mRNA vaccine technology?



The Nobel was awarded specifically for:

- (A) The CRISPR-Cas9 gene-editing mechanism for treating genetic diseases
- (B) The role of ribosomes in protein synthesis and cell biology
- (C) Nucleoside base modifications that enabled the development of effective mRNA vaccines
- (D) The discovery of the DNA double-helix structure by Watson and Crick

- Q2.** According to the Global Hunger Index (GHI) 2023 report, India's ranking among the countries assessed was:
- (A) 94th out of 116 countries
 - (B) 111th out of 125 countries
 - (C) 121st out of 125 countries
 - (D) 101st out of 116 countries
- Q3.** "Azadi Ka Amrit Mahotsav" was a national initiative launched by the Government of India to celebrate how many years of Indian independence?
- (A) 50 years
 - (B) 60 years
 - (C) 100 years
 - (D) 75 years
- Q4.** As of 2024, the state of Maharashtra is divided into how many districts?
- (A) 36
 - (B) 30
 - (C) 33
 - (D) 40
- Q5.** Who was the **last Peshwa** of the Maratha Empire?
- (A) Madhav Rao I
 - (B) Nana Saheb (Balaji Baji Rao)
 - (C) Baji Rao II
 - (D) Vishwas Rao
- Q6.** The Konkan Railway connects which two terminal cities along India's western coast?
- (A) Mumbai to Pune



- (B) Roha (Maharashtra) to Thokur/Mangaluru (Karnataka)
- (C) Thane to Udupi
- (D) Mumbai to Madgaon (Goa) only

Q7. What is the primary historical significance of the **Battle of Koregaon** fought on 1 January 1818?

- (A) It marked the founding of the Maratha Empire under Chhatrapati Shivaji
- (B) It was a decisive Maratha victory in the First Anglo-Maratha War
- (C) It was the battle in which Baji Rao II defeated the British forces
- (D) The British East India Company defeated Peshwa Baji Rao II's forces, effectively ending Peshwa rule

Q8. According to the Census of India 2011, the approximate overall literacy rate of the state of Maharashtra was:

- (A) 82.9%
- (B) 74.0%
- (C) 77.5%
- (D) 68.8%

Q9. The **Swachh Bharat Mission** (Clean India Mission) was officially launched by the Government of India on:

- (A) 26 January 2014
- (B) 15 August 2014
- (C) 2 October 2014
- (D) 1 April 2015

Q10. Which was India's **first spacecraft to orbit the Moon**?

- (A) Mangalyaan (Mars Orbiter Mission)
- (B) Chandrayaan-1



- (C) Chandrayaan-2
- (D) AstroSat

Q11. What does the abbreviation **PMGSY** stand for?

- (A) Pradhan Mantri Gramin Swasthya Yojana
- (B) Pradhan Mantri Grameen Sahay Yojana
- (C) Pradhan Mantri Gram Seva Yojana
- (D) Pradhan Mantri Gram Sadak Yojana

Q12. The **74th Constitutional Amendment Act** of India primarily relates to:

- (A) Urban local bodies – Municipalities and Nagar Panchayats
- (B) Panchayati Raj institutions in rural areas
- (C) Reservations for Other Backward Classes (OBCs)
- (D) Fundamental duties of Indian citizens

Q13. With which of the following countries does India share **only a maritime (sea) border** and NOT a land border?

- (A) Nepal
- (B) Bangladesh
- (C) Sri Lanka
- (D) Myanmar

Q14. The Goods and Services Tax (GST) was implemented across India with effect from:

- (A) 1 April 2017
- (B) 1 July 2017
- (C) 1 January 2018
- (D) 15 August 2017

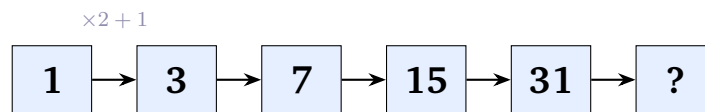
Q15. Who is the *ex-officio* **Chairperson** of the GST Council of India?



- (A) Prime Minister of India
- (B) President of India
- (C) Chief Justice of India
- (D) Union Finance Minister of India

PART B: Mental Ability (Q16–Q30)

Q16. Find the **next number** in the series shown below:



1, 3, 7, 15, 31, ____ ?

- (A) 63
- (B) 57
- (C) 61
- (D) 65

Q17. Choose the correct answer to complete the analogy:

ABCD : BCDE :: MNOP : ?

- (A) LMNO
- (B) MNPQ
- (C) NMPQ
- (D) NOPQ

Q18. Complete the following word analogy:

Book : Library :: Painting : ?

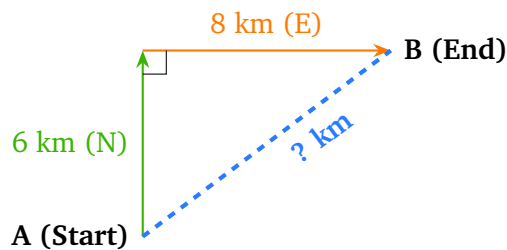


- (A) Museum
- (B) Gallery
- (C) School
- (D) Academy

Q19. Identify the **odd one out** from the following group:

- (A) Carrot
- (B) Potato
- (C) Brinjal
- (D) Radish

Q20. Ramesh starts from Point A, walks **6 km North**, then turns and walks **8 km East** to reach Point B. What is the **straight-line distance** from A to B?



- (A) 8 km
- (B) 6 km
- (C) 12 km
- (D) 10 km

Q21. Study the matrix below and find the value of ‘?’:

Col 1	Col 2	Col 3
3	6	12
4	8	16
5	10	?



- (A) 15
- (B) 20
- (C) 25
- (D) 18

Q22. In a certain code language, each letter is assigned its position number in the English alphabet ($A = 1, B = 2, \dots, Z = 26$), and the **coded value** of a word equals the **sum of its letter positions**. What is the coded value of the word **EARTH**?

- (A) 52
- (B) 47
- (C) 55
- (D) 60

Q23. Identify the **next term** in the letter-pair series:

AZ, CX, EV, GT, ?

- (A) HS
- (B) HT
- (C) IR
- (D) IS

Q24. Consider the two statements below and choose the conclusion that **definitely follows**:

- I. No chair is a table.
- II. All tables are wooden.

- (A) No chair is wooden.
- (B) Some wooden objects are not chairs.



- (C) All wooden objects are chairs.
- (D) Some chairs are tables.

Q25. Pointing to a man, a woman says: “*He is the brother of my uncle’s son.*”
How is the man **related to the woman**?

- (A) Uncle
- (B) Brother
- (C) Nephew
- (D) Cousin

Q26. If $15 \times 15 = 225$, what is the value of 25×25 ?

- (A) 625
- (B) 525
- (C) 650
- (D) 600

Q27. Choose the correct answer to complete the number analogy:

$$2 : 8 :: 3 : ?$$

- (A) 9
- (B) 18
- (C) 27
- (D) 24

Q28. Which of the following is the **odd one out**?

- (A) Sitar
- (B) Flute
- (C) Guitar



(D) Cello

Q29. Find the **next number** in the series:

5, 10, 20, 40, ?

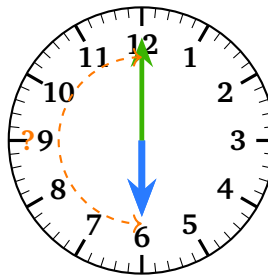
(A) 60

(B) 70

(C) 75

(D) 80

Q30. At exactly **6:00 o'clock**, what is the angle between the **hour hand** and the **minute hand** of a clock?



(A) 180°

(B) 90°

(C) 120°

(D) 60°

PART C: Teacher Aptitude & Sports
Related Knowledge (Q31–Q50)

Q31. In **field hockey**, a *penalty corner* is awarded to the attacking team when the defending team:

(A) Commits a foul anywhere in the opposition's half of the field

(B) Intentionally passes the ball back to their own goalkeeper



- (C) Commits a foul inside their own shooting circle, or intentionally plays the ball over their own backline
- (D) Commits a foul at the centre of the field during a bully-off

Q32. Under current BWF (Badminton World Federation) rules, the **maximum number of points** a player/pair can reach in a **single game** is:

- (A) 15 points
- (B) 11 points
- (C) 21 points
- (D) 25 points

Q33. The **Wimbledon Grand Slam** tennis tournament is played on which type of court surface?

- (A) Clay
- (B) Grass
- (C) Hard court (acrylic)
- (D) Artificial turf

Q34. India played its **first-ever Day-Night (pink ball) Test match** at which venue and in which year?

- (A) Eden Gardens, Kolkata – 2019
- (B) Wankhede Stadium, Mumbai – 2019
- (C) Feroz Shah Kotla, Delhi – 2020
- (D) Narendra Modi Stadium, Ahmedabad – 2021

Q35. Which of the following is **prohibited** in **Greco-Roman wrestling**?

- (A) Holds applied to the opponent's upper arms
- (B) Leg trips used to assist a throw
- (C) Holds, trips, or lifts involving the legs or below the waist

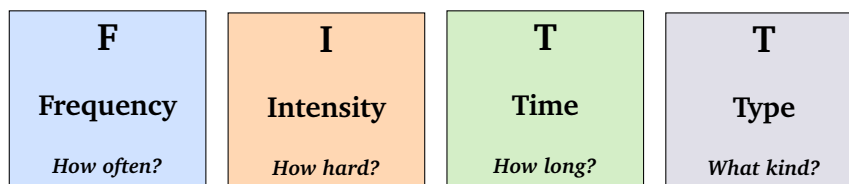


(D) Arm-bar and joint-lock submissions

Q36. In swimming's **Individual Medley (IM)**, the correct **order of strokes** is:

- (A) Freestyle → Butterfly → Backstroke → Breaststroke
- (B) Butterfly → Backstroke → Breaststroke → Freestyle
- (C) Backstroke → Butterfly → Freestyle → Breaststroke
- (D) Breaststroke → Butterfly → Backstroke → Freestyle

Q37. The **FITT principle** is a widely used framework for planning exercise programmes. Which **component of FITT** describes specifically *how hard* you exercise?



- (A) Frequency
- (B) Time
- (C) Type
- (D) Intensity

Q38. The physical quality that combines **explosive muscular strength** with **speed of movement** (i.e., force applied very rapidly) is termed:

- (A) Power
- (B) Endurance
- (C) Agility
- (D) Flexibility

Q39. **Agility ladder drills** (speed ladder training) primarily develop which of the following physical qualities?

- (A) Maximal muscular strength and muscle hypertrophy



- (B) Cardiovascular (aerobic) endurance and VO_2 max
- (C) Foot speed, neuromuscular coordination, and agility
- (D) Joint flexibility and static range of motion

Q40. In Muska Mosston's **Spectrum of Teaching Styles**, the *Self-Check style* (Style E) requires the student to:

- (A) Receive individual, immediate feedback from the teacher after each attempt
- (B) Evaluate their own performance against a criteria sheet provided by the teacher
- (C) Observe and evaluate a partner's performance (Reciprocal style)
- (D) Design their own practice programme without teacher input

Q41. Which of the following is the **primary hallmark** of Overtraining Syndrome (OTS) in athletes?

- (A) Rapid and unexplained body weight gain
- (B) Significantly increased training motivation and drive
- (C) Acute muscle soreness limited to a single training session
- (D) Persistent fatigue and a decline in performance despite adequate rest

Q42. In sports psychology, **somatic anxiety** experienced before competition refers to:

- (A) Bodily (physical) symptoms such as increased heart rate, muscle tension, and excessive sweating
- (B) Negative self-talk and worry about one's performance outcome (cognitive anxiety)
- (C) Heightened self-confidence and optimal arousal
- (D) Increased aggression and hostility directed towards opponents

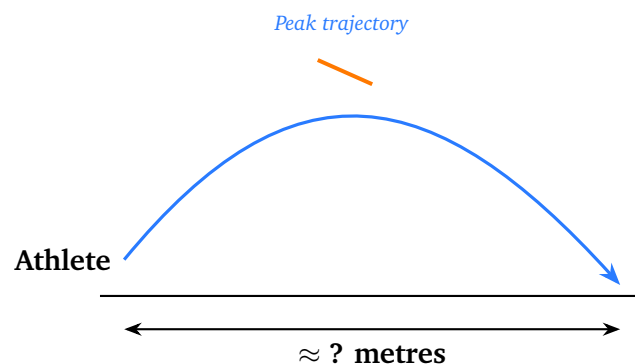
Q43. At the **Tokyo Olympics 2020** (held in 2021), Neeraj Chopra won India's



first-ever individual Olympic gold medal in an athletics track-and-field event. In which event did he compete?

- (A) Shot Put
- (B) Hammer Throw
- (C) Javelin Throw
- (D) Discus Throw

Q44. Neeraj Chopra's gold-medal winning throw at the **Tokyo Olympics 2020** measured approximately:



- (A) 85.65 m
- (B) 87.58 m
- (C) 89.30 m
- (D) 86.44 m

Q45. The headquarters of **FIFA** (Fédération Internationale de Football Association) is located in:

- (A) Paris, France
- (B) Geneva, Switzerland
- (C) Brussels, Belgium
- (D) Zurich, Switzerland

Q46. The **International Cricket Council (ICC)** has its headquarters in:



- (A) Dubai, United Arab Emirates
- (B) Lord's Cricket Ground, London, United Kingdom
- (C) Mumbai, India
- (D) Singapore

Q47. The **Court of Arbitration for Sport (CAS)**, the world's highest independent sports tribunal, is headquartered in:

- (A) Geneva, Switzerland
- (B) Vienna, Austria
- (C) Lausanne, Switzerland
- (D) Brussels, Belgium

Q48. Which sport is traditionally recognised as India's **National Sport**?

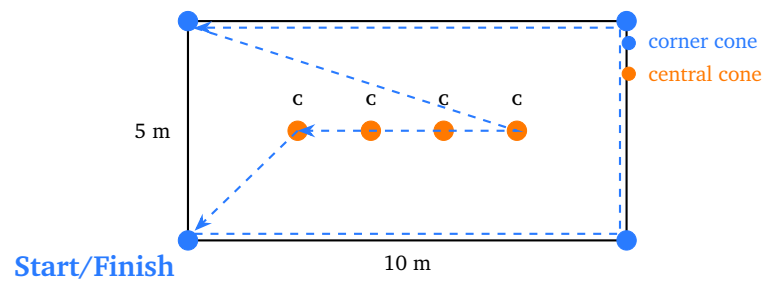
- (A) Cricket
- (B) Field Hockey
- (C) Kabaddi
- (D) Badminton

Q49. In the **2023 FIH Men's Hockey World Cup** (hosted in Bhubaneswar and Rourkela, India), which team was the **runner-up**?

- (A) Netherlands
- (B) Australia
- (C) India
- (D) Belgium

Q50. The **Illinois Agility Run Test** is a widely used standardised fitness test. Which physical quality does it **primarily measure**?





- (A) Agility
- (B) Aerobic capacity (VO_2 max)
- (C) Muscular strength
- (D) Speed endurance



DETAILED SOLUTIONS (Paper 6 of 8)**Solution 1.****Solution**

Topic: Nobel Prize in Physiology or Medicine 2023

The **2023 Nobel Prize in Physiology or Medicine** was awarded jointly to **Katalin Karikó** (BioNTech/University of Pennsylvania) and **Drew Weissman** (University of Pennsylvania) for their groundbreaking discoveries concerning **nucleoside base modifications** that enabled the development of effective mRNA vaccines. Their key insight was that certain chemical modifications to mRNA nucleosides prevented the mRNA from triggering an immune-rejection response inside cells, while still directing protein production. This foundational research made possible the Pfizer-BioNTech and Moderna COVID-19 mRNA vaccines, which were deployed worldwide during the pandemic.

- Option (A) – CRISPR-Cas9 was developed by Jennifer Doudna and Emmanuelle Charpentier (Nobel 2020 in Chemistry).
- Option (B) – Ribosome structure was the subject of the 2009 Nobel in Chemistry.
- Option (D) – DNA double helix: Watson, Crick, Wilkins won the 1962 Nobel in Physiology or Medicine.

Answer: (C) [Go Back to Q 1](#)

Solution 2.**Solution**

Topic: Global Hunger Index (GHI) 2023

According to the **Global Hunger Index 2023**, India was ranked **111th out of 125 countries** assessed, with a GHI score of **28.7** (classified as “serious” hunger level). India ranked below several neighbouring countries including Nepal (69th), Bangladesh (81st), and Pakistan (102nd). The GHI is computed using four indicators: undernourishment, child wasting, child stunting, and child mortality.

Answer: (B) [Go Back to Q 2](#)



Solution 3.**Solution**

Topic: Azadi Ka Amrit Mahotsav – 75 years of independence

“**Azadi Ka Amrit Mahotsav**” (AKAM) was a government of India initiative commemorating **75 years** of India’s independence (1947–2022). The programme was launched on **12 March 2021** – the 75th anniversary of the start of the Dandi March (Salt March) led by Mahatma Gandhi – and officially concluded on **15 August 2023**. The four themes of AKAM were: freedom struggle, ideas at 75, achievements at 75, and actions at 75.

Answer: (D) [Go Back to Q 3](#)

Solution 4.**Solution**

Topic: Administrative divisions of Maharashtra

Maharashtra is divided into **36 districts**, grouped into six administrative divisions:

- Konkan Division (7 districts) • Nashik Division (6 districts)
- Pune Division (5 districts) • Chhatrapati Sambhajnagar (Aurangabad) Division (8 districts)
- Amravati Division (5 districts) • Nagpur Division (6 districts)

Maharashtra is India’s third-largest state by area and second-most populous. Its administrative headquarters is Mumbai (Mumbai/Nagpur for winter sessions of the legislature).

Answer: (A) [Go Back to Q 4](#)

Solution 5.**Solution**

Topic: Maratha Empire – the Last Peshwa

Baji Rao II (1775–1851) was the **last Peshwa** (Prime Minister) of the Maratha Confederacy. After suffering defeat at the **Battle of Koregaon** (1 January 1818) and a series of reverses during the Third Anglo-Maratha War (1817–18), he surrendered to the British and was exiled to **Bithur**,



near Kanpur, where he lived on a British pension until his death. His removal brought a formal end to the Peshwa dynasty, which had wielded effective political power over the Maratha Confederacy since 1713.

Answer: (C) [Go Back to Q 5](#)

Solution 6.

Solution

Topic: Konkan Railway – route

The **Konkan Railway** (operated by Konkan Railway Corporation Limited, KRCL) runs along India's scenic western coastal strip, connecting **Roha** (in Raigad district, Maharashtra) in the north to **Thokur** (near Mangaluru, Karnataka) in the south – a total distance of approximately **741 km**. The route passes through Maharashtra, Goa, and Karnataka, linking Mumbai's hinterland to Mangaluru. It is renowned for its engineering feat of crossing the Western Ghats with numerous tunnels (92) and bridges (2,000+).

Answer: (B) [Go Back to Q 6](#)

Solution 7.

Solution

Topic: Battle of Koregaon 1818 – historical significance

The **Battle of Koregaon** was fought on **1 January 1818** near the village of Koregaon Bhima (Pune district). A British East India Company force of approximately 800 soldiers (predominantly Mahars of the Bombay Infantry) under Captain Francis Staunton held off a much larger Peshwa army (reportedly 25,000 men) of **Peshwa Baji Rao II**. Although tactically inconclusive, the battle broke the last serious Peshwa military resistance. Baji Rao II subsequently surrendered in June 1818, **ending Peshwa rule** and completing British dominance in the Deccan. A victory pillar (obelisk) was erected at Koregaon and is still visited on 1 January every year.

Answer: (D) [Go Back to Q 7](#)



Solution 8.

Solution

Topic: Maharashtra Literacy Rate – Census 2011

According to the **Census of India 2011**, Maharashtra's overall **literacy rate** was **82.9%**:

- Male literacy rate: 89.8%
- Female literacy rate: 75.5%

This was significantly above the national average of 74.04%. Maharashtra ranked among the more literate states of India. For comparison, Kerala led at 93.9%, while Bihar was the lowest at 61.8%.

Answer: (A) [Go Back to Q 8](#)

Solution 9.

Solution

Topic: Swachh Bharat Mission – launch

The **Swachh Bharat Mission (SBM)** was officially launched by Prime Minister Narendra Modi on **2 October 2014** – the 145th birth anniversary of Mahatma Gandhi – to honour Gandhi's vision of a clean India. The mission aimed to make India "Open Defecation Free" (ODF) by **2 October 2019** (Gandhi's 150th anniversary). It had two sub-missions: SBM (Grameen) for rural areas and SBM (Urban) for towns/cities. SBM Phase-2 was launched on 1 October 2021, extending the scope to solid waste management and ODF sustainability.

Answer: (C) [Go Back to Q 9](#)

Solution 10.

Solution

Topic: ISRO Lunar Missions

Chandrayaan-1 was India's **first lunar probe**, launched by ISRO on **22 October 2008** aboard a PSLV-XL rocket. It successfully entered lunar orbit and carried 11 scientific payloads (Indian and international). Its most significant discovery was confirming the presence of **water molecules on the Moon's surface**, detected using NASA's Moon Mineralogy Mapper (M³). The mission lasted until August 2009. (Chandrayaan-2 was



launched in 2019; Chandrayaan-3 successfully soft-landed on the Moon's south polar region in August 2023.)

Answer: (B) [Go Back to Q 10](#)

Solution 11.

Solution

Topic: Government Scheme Abbreviations – PMGSY

PMGSY stands for **Pradhan Mantri Gram Sadak Yojana** (Prime Minister's Rural Road Programme). Launched in **December 2000** by the NDA government, it is a centrally-sponsored scheme to provide all-weather road connectivity to unconnected rural habitations. It is administered by the **Ministry of Rural Development**. Under PMGSY, Phase-III is currently ongoing, with a focus on consolidating existing roads and improving connectivity in aspirational districts and Left Wing Extremism (LWE) affected areas.

Answer: (D) [Go Back to Q 11](#)

Solution 12.

Solution

Topic: 74th Constitutional Amendment (Nagarpalika Act)

The **74th Constitutional Amendment Act, 1992** (also called the Nagarpalika Act) added **Part IX-A** to the Indian Constitution and provides a framework for **Urban Local Bodies (ULBs)**. It established three types of ULBs:

- Nagar Panchayats (for transitional areas)
- Municipal Councils (for smaller urban areas)
- Municipal Corporations (for larger cities)

It also added the **12th Schedule** listing 18 functional areas for ULBs. *Note:* The **73rd Amendment** deals with Panchayati Raj (rural local self-governance).

Answer: (A) [Go Back to Q 12](#)



Solution 13.**Solution****Topic:** India's International Borders

India shares land borders with **seven** countries: Pakistan, Afghanistan, China, Nepal, Bhutan, Bangladesh, and Myanmar. **Sri Lanka** is separated from India by the **Palk Strait** and the Gulf of Mannar – the two countries share only a **maritime (sea) boundary**, not a land border. The shortest sea distance between India (Dhanushkodi, Tamil Nadu) and Sri Lanka (Talaimannar) is approximately **31 km**. The historical land bridge “Adam’s Bridge” (Ram Setu) is submerged.

Answer: (C) [Go Back to Q 13](#)**Solution 14.****Solution****Topic:** GST – Implementation Date

India's **Goods and Services Tax (GST)** was implemented with effect from **1 July 2017**, replacing a complex web of central and state indirect taxes (excise duty, service tax, VAT, CST, octroi, etc.). The constitutional basis was the **101st Constitutional Amendment Act, 2016** (adding Article 246A and the GST Council under Article 279A). GST follows a dual structure: **CGST** (Central GST) and **SGST** (State GST) on intra-state supplies; **IGST** (Integrated GST) on inter-state supplies.

Answer: (B) [Go Back to Q 14](#)**Solution 15.****Solution****Topic:** GST Council – Chairperson

The **GST Council** is established under **Article 279A** of the Constitution (inserted by the 101st Amendment). Its composition:

- **Chairperson (ex-officio):** Union Finance Minister of India
- Union Minister of State in charge of Finance/Revenue
- Finance/Taxation Ministers from all state governments and UTs with legislatures



The GST Council makes recommendations on tax rates, exemptions, threshold limits, and other matters relating to GST. Decisions are taken by a three-fourths weighted majority vote.

Answer: (D) [Go Back to Q 15](#)

Solution 16.

Solution

Topic: Number Series – Pattern Recognition ($\times 2 + 1$)

Each term is obtained by **multiplying the previous term by 2 and adding 1**:

$$1 \xrightarrow{\times 2 + 1} 3 \xrightarrow{\times 2 + 1} 7 \xrightarrow{\times 2 + 1} 15 \xrightarrow{\times 2 + 1} 31 \xrightarrow{\times 2 + 1} 63$$

Verification: $31 \times 2 + 1 = 62 + 1 = 63$.

Alternatively, the series can be written as $2^n - 1$: $1 = 2^1 - 1$, $3 = 2^2 - 1$, $7 = 2^3 - 1$, $15 = 2^4 - 1$, $31 = 2^5 - 1$, $63 = 2^6 - 1$.

Answer: (A) [Go Back to Q 16](#)

Solution 17.

Solution

Topic: Letter Analogy – Alphabetical Shift (+1)

In the pair **ABCD : BCDE**, each letter is shifted **one position forward** in the alphabet:

$$A \rightarrow B, \quad B \rightarrow C, \quad C \rightarrow D, \quad D \rightarrow E$$

Applying the **same rule** to **MNOP**:

$$M \rightarrow N, \quad N \rightarrow O, \quad O \rightarrow P, \quad P \rightarrow Q$$

Therefore: **MNOP : NOPQ**.

Answer: (D) [Go Back to Q 17](#)



Solution 18.

Solution

Topic: Word Analogy – Place of Display/Collection

The relationship in **Book : Library** is: a book is stored and displayed in a library (a dedicated institution for books). Applying the same logic – **Painting : Gallery**: a painting is displayed in an **art gallery** (a dedicated venue for visual artworks such as paintings). A gallery is the specific venue for paintings, just as a library is specifically for books.

Note: A “Museum” can house a wide variety of artefacts (historical, scientific, artistic), while a “Gallery” is the specialist venue for visual art/paintings, making “Gallery” the more precise and correct analogy.

Answer: (B) [Go Back to Q 18](#)

Solution 19.

Solution

Topic: Odd One Out – Root Vegetables vs Fruit

- **Carrot** – a taproot (underground storage root) ✓
- **Potato** – a tuberous root/stem (underground) ✓
- **Radish** – a taproot (underground) ✓
- **Brinjal (Eggplant)** – grows *above ground* on a shrub; botanically a *berry (fruit)* ×

Brinjal is the odd one out because it is **not** a root or underground vegetable – it grows above ground. Carrot, Potato, and Radish are all root/underground vegetables. Botanically, brinjal is also classified as a fruit (berry), while the others are storage organs.

Answer: (C) [Go Back to Q 19](#)



Solution 20.

Solution

Topic: Direction and Distance – Pythagoras Theorem

Ramesh walks 6 km North then 8 km East, forming the two legs of a right-angled triangle. The straight-line distance from A to B is the **hypotenuse**:

$$d = \sqrt{(\text{North})^2 + (\text{East})^2} = \sqrt{6^2 + 8^2} = \sqrt{36 + 64} = \sqrt{100} = 10 \text{ km}$$

This is the classic **6-8-10 right triangle** (a scaled Pythagorean triple based on 3-4-5, multiplied by 2).

Answer: (D) [Go Back to Q 20](#)

Solution 21.

Solution

Topic: Matrix Reasoning – Column Doubling Pattern

Examining each row of the matrix:

Col 1	Col 2	Col 3	Pattern
3	6	12	$3 \times 2 = 6, 6 \times 2 = 12$
4	8	16	$4 \times 2 = 8, 8 \times 2 = 16$
5	10	?	$5 \times 2 = 10, 10 \times 2 = \mathbf{20}$

Each value in Column 2 is double Column 1; each value in Column 3 is double Column 2. Therefore, $? = 10 \times 2 = \mathbf{20}$.

Answer: (B) [Go Back to Q 21](#)

Solution 22.

Solution

Topic: Alphabetical Positional Coding

Using A = 1, B = 2, ..., Z = 26, the letter positions in **EARTH** are:

$$\underbrace{E}_5 + \underbrace{A}_1 + \underbrace{R}_{18} + \underbrace{T}_{20} + \underbrace{H}_8 = 5 + 1 + 18 + 20 + 8 = \mathbf{52}$$

Answer: (A) [Go Back to Q 22](#)



Solution 23.

Solution

Topic: Letter Series – Two Interleaved Arithmetic Sequences

Each pair consists of two letters following independent patterns:

- **First letters:** A, C, E, G, ... – increasing by 2 each time (every other letter).
- **Second letters:** Z, X, V, T, ... – decreasing by 2 each time.

Next pair:

$$\text{First: } G + 2 = \text{I}, \quad \text{Second: } T - 2 = \text{R}$$

Answer: **IR**.

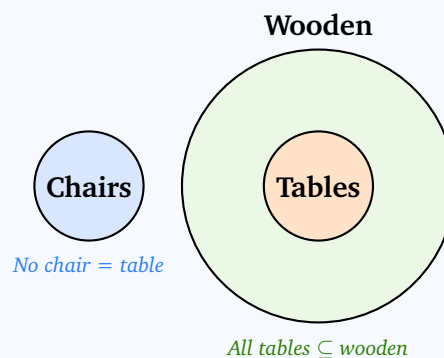
Answer: (C) [Go Back to Q 23](#)

Solution 24.

Solution

Topic: Syllogism – Venn Diagram Method

Given: (I) No chair is a table. (II) All tables are wooden.



Analysis of each option:

- (A) “No chair is wooden” – **NOT valid**. The diagram allows chairs to be in the Wooden set (there is no overlap restriction between Chairs and Wooden given).
- (B) “Some wooden objects are not chairs” – **VALID**. Tables are wooden (from Premise II) and no table is a chair (from Premise I); therefore some wooden objects (i.e., tables) are certainly not chairs.
- (C) “All wooden objects are chairs” – Clearly false.
- (D) “Some chairs are tables” – Directly contradicts Premise I.



Answer: (B) [Go Back to Q 24](#)

Solution 25.

Solution

Topic: Blood Relations – Step-by-Step Tracing

The woman's statement: "He is the brother of my uncle's son."

- Woman's **uncle's son** = Woman's **first cousin** (from uncle's side of the family).
- The man is the **brother** of this cousin.
- The brother of a first cousin is also a **first cousin**.

Therefore, the man is the woman's **Cousin**.

Answer: (D) [Go Back to Q 25](#)

Solution 26.

Solution

Topic: Basic Arithmetic – Squares

Direct calculation:

$$25 \times 25 = 625$$

Using the algebraic identity $(a + b)^2 = a^2 + 2ab + b^2$ with $a = 20, b = 5$:

$$25^2 = (20 + 5)^2 = 400 + 200 + 25 = \mathbf{625}$$

Alternatively: $25^2 = 25 \times 25 = 25 \times 20 + 25 \times 5 = 500 + 125 = 625$.

Answer: (A) [Go Back to Q 26](#)



Solution 27.

Solution

Topic: Number Analogy – Cube Relationship

The relationship 2 : 8 follows the rule: the second number is the **cube of the first**.

$$2^3 = 8 \quad \checkmark$$

Applying the same rule to find 3 :?:

$$3^3 = 3 \times 3 \times 3 = \mathbf{27}$$

Note: Option (A) $9 = 3^2$ (square, not cube). Option (B) $18 = 3 \times 6$ (no standard pattern). Option (D) $24 \neq 3^3$.

Answer: (C) [Go Back to Q 27](#)

Solution 28.

Solution

Topic: Odd One Out – Musical Instruments by Family

- **Sitar** – chordophone / string instrument ✓
- **Guitar** – chordophone / string instrument ✓
- **Cello** – chordophone / bowed string instrument ✓
- **Flute** – aerophone / *wind instrument* (woodwind family) ✗

Flute is the odd one out because it is a **wind instrument** – sound is produced by the vibration of an air column. Sitar, Guitar, and Cello are all **string instruments** – sound is produced by vibrating strings.

Answer: (B) [Go Back to Q 28](#)



Solution 29.

Solution

Topic: Number Series – Geometric Progression (Common Ratio = 2)

Each term is obtained by **multiplying the previous term by 2**:

$$5 \xrightarrow{\times 2} 10 \xrightarrow{\times 2} 20 \xrightarrow{\times 2} 40 \xrightarrow{\times 2} 80$$

Common ratio $r = 2$. Next term: $40 \times 2 = 80$.

Answer: (D) [Go Back to Q 29](#)

Solution 30.

Solution

Topic: Clock Angle Problem – 6:00 o'clock

At exactly **6:00**:

- The **minute hand** points at the **12** (top), i.e., at 0° .
- The **hour hand** points at the **6** (bottom), i.e., at 180° .

Angle between the two hands:

$$\theta = |180^\circ - 0^\circ| = 180^\circ$$

The two hands are exactly **opposite** each other, forming a straight line (diameter of the clock face). The angle is 180° .

Answer: (A) [Go Back to Q 30](#)

Solution 31.

Solution

Topic: Field Hockey Rules – Penalty Corner

A **penalty corner** (also called a short corner) in field hockey is awarded to the attacking team under the following conditions:

- A **foul is committed by a defender inside the shooting circle** (the “D” or striking circle).
- A **defender intentionally plays the ball over the backline** (even without fouling inside the D).



- A defender (excluding the goalkeeper) intentionally plays the ball into their own goal.

During a penalty corner: the ball is placed on the backline **10 yards (9.14 m) from the nearest goalpost**. All attacking players must be outside the circle; at least **four defenders (plus goalkeeper)** must stand behind the backline.

Answer: (C) [Go Back to Q 31](#)

Solution 32.

Solution

Topic: Badminton Scoring System (BWF Rules)

Under current **Badminton World Federation (BWF)** rules:

- Each game is played to **21 points**.
- A player/pair must win by a margin of at least **2 points**.
- If the score reaches **20-all**, play continues until one side leads by 2 (e.g., 22-20).
- If the score reaches **29-29**, the very **next point wins** (i.e., the **30th point** is the maximum and decides the game at deuce).

So, the **maximum** a game can reach is 30 points (when the score stands at 29-29 and the next rally is won). However, a game is normally played to **21 points**.

Answer: (C) [Go Back to Q 32](#)

Solution 33.

Solution

Topic: Tennis Grand Slams – Court Surfaces

The four Grand Slam tournaments and their surfaces:

Grand Slam	Surface
Australian Open	Hard court (Plexicushion/GreenSet)
French Open (Roland Garros)	Red Clay
Wimbledon	Grass (natural lawn)
US Open	Hard court (DecoTurf)



Wimbledon (The Championships), held at the All England Lawn Tennis and Croquet Club (AELTC) in London, is the oldest Grand Slam tournament (first held in 1877) and the only one still played on **natural grass**.

Answer: (B) [Go Back to Q 33](#)

Solution 34.

Solution

Topic: Cricket – India's First Day-Night (Pink Ball) Test

India's inaugural **Day-Night Test match** was played at **Eden Gardens, Kolkata** from **22–24 November 2019**, against **Bangladesh**. India won emphatically by an innings and 46 runs inside three days. The match used **Dukes pink balls** under floodlights. Eden Gardens was selected for its excellent floodlight infrastructure and capacity (capacity $\approx 68,000$). The match was part of the ICC World Test Championship cycle.

Answer: (A) [Go Back to Q 34](#)

Solution 35.

Solution

Topic: Greco-Roman Wrestling – Key Rules

In **Greco-Roman wrestling** (one of the two Olympic wrestling disciplines), the defining rule is that **all holds, trips, lifts, and attacks involving the legs or any body part below the waist are strictly prohibited**. Competitors may only apply techniques to the **upper body (torso, arms, neck, and head)**. This contrasts with **Freestyle wrestling**, where leg attacks and using the legs defensively are both permitted. The restriction forces Greco-Roman wrestlers to master upper-body throws, lifts, and locks (e.g., the suplex, gut wrench).

Answer: (C) [Go Back to Q 35](#)



Solution 36.

Solution

Topic: Swimming – Individual Medley (IM) Stroke Order

The **Individual Medley** follows a fixed stroke order mandated by World Aquatics (FINA):

Butterfly → Backstroke → Breaststroke → Freestyle

A helpful mnemonic: “*Fly Back Breast Free*” (FBBF).

Note: In the **medley relay**, the order is different: Backstroke → Breaststroke → Butterfly → Freestyle (each leg swum by a different swimmer). Common IM events: 200 m IM and 400 m IM (both Olympic events).

Answer: (B) [Go Back to Q 36](#)

Solution 37.

Solution

Topic: FITT Principle of Exercise Prescription

The **FITT principle** provides a framework for structuring exercise programmes:

- **F – Frequency:** How *often* you exercise (number of sessions per week).
- **I – Intensity:** How *hard* you exercise (measured by heart rate, RPE, % VO₂max, % 1RM, pace, etc.).
- **T – Time:** How *long* each session lasts (duration in minutes/hours).
- **T – Type:** The *kind* of exercise performed (running, swimming, resistance training, yoga, etc.).

Intensity is the FITT component that specifies the **level of effort or exertion** during exercise. For aerobic training, intensity is often prescribed as a percentage of maximum heart rate (e.g., 60–80% HRmax).

Answer: (D) [Go Back to Q 37](#)



Solution 38.

Solution

Topic: Components of Physical Fitness – Power

Power is defined as the ability to exert maximum **muscular force as rapidly as possible**. Mathematically:

$$\text{Power} = \text{Force} \times \text{Velocity} \quad (\text{or: Work} / \text{Time})$$

Power combines **strength** and **speed**. It is a key attribute in explosive sports activities such as sprinting starts, jumping (basketball, volleyball, high jump), throwing events (javelin, shot put, discus), and striking (boxing, karate). *Power* $\neq$ *endurance* (which is the ability to sustain effort over time).

Answer: (A) [Go Back to Q 38](#)

Solution 39.

Solution

Topic: Agility Ladder Training – Physiological Adaptations

Agility ladder (speed ladder) drills are a staple in sports conditioning and primarily develop:

- **Foot speed** – rapid, precise placement of feet in and out of rungs.
- **Neuromuscular coordination** – improved signalling between the nervous system and muscles.
- **Agility** – the ability to change body direction quickly and accurately.
- **Rhythm and timing** – proprioceptive awareness and balance during rapid movements.

They do **not** significantly develop maximal muscular strength, VO_2 max, or static flexibility, though they provide some low-level cardiovascular stimulus.

Answer: (C) [Go Back to Q 39](#)



Solution 40.

Solution

Topic: Mosston's Spectrum of Teaching Styles – Self-Check (Style E)

In Muska Mosston's **Teaching Spectrum**, each style shifts decision-making between teacher and learner. In the **Self-Check style (Style E)**:

- The **teacher** prepares a **criteria sheet** (a detailed checklist/rubric) describing what correct performance looks like.
- The **student** performs the task and then **self-evaluates** by comparing their own performance against the criteria.
- The teacher does **not** provide direct corrective feedback during the practice.

This style fosters independence, self-awareness, and honest self-assessment. Contrast: *Reciprocal (C)* = partner evaluates; *Inclusion (D)* = students choose level; *Learner-Designed (H)* = student designs the task entirely.

Answer: (B) [Go Back to Q 40](#)

Solution 41.

Solution

Topic: Overtraining Syndrome (OTS)

Overtraining Syndrome (OTS) occurs when training stress chronically exceeds the athlete's recovery capacity. The **cardinal signs**:

- **Persistent fatigue** that does not resolve with rest
- **Unexplained decline in athletic performance** despite continued (or even increased) training

Additional symptoms: mood disturbances (irritability, depression, lack of motivation), frequent illness (immunosuppression), sleep disruption, loss of appetite, elevated resting heart rate, and musculoskeletal pain. Treatment: planned reduction in training load (deload), adequate nutrition, sleep, and psychological support.

Answer: (D) [Go Back to Q 41](#)

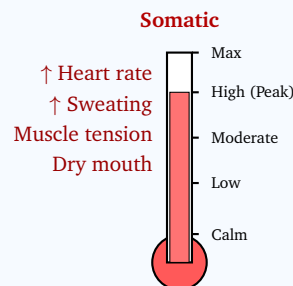


Solution 42.

Solution

Topic: Sports Psychology – Somatic vs. Cognitive Anxiety

Pre-competition anxiety has two distinct components:



- **Somatic anxiety:** *Physical/bodily* manifestations – increased heart rate, rapid breathing, muscle tension, excessive sweating, butterflies in the stomach, nausea, trembling.
- **Cognitive anxiety:** *Mental/thought* manifestations – negative self-talk, worry about outcome, fear of failure, concentration difficulties.

Answer: (A) [Go Back to Q 42](#)

Solution 43.

Solution

Topic: Neeraj Chopra – Tokyo Olympics 2020

Neeraj Chopra represented India in the **Javelin Throw** event at the Tokyo Olympics 2020 (held in August 2021). On **7 August 2021**, he won the **gold medal** with a throw of **87.58 m** in his second attempt – becoming the **first Indian track-and-field athlete** to win an Olympic gold medal, and only the second Indian to win an individual Olympic gold (after Abhinav Bindra, shooting, 2008). He subsequently won the World Athletics Championship title in 2022 (Eugene, USA) and became World No. 1.

Answer: (C) [Go Back to Q 43](#)



Solution 44.

Solution

Topic: Neeraj Chopra – Olympic Gold Throw Distance

Neeraj Chopra's gold-medal winning throw at the **Tokyo Olympics 2020** (7 August 2021) measured **87.58 metres**, achieved in his **second attempt** of the final. This was the best throw of the entire final. Key records for reference:

- **Olympic gold winning throw (Tokyo):** 87.58 m
- **Personal best / Asian record:** 89.94 m (Lausanne Diamond League, 2022)
- **World record (men's javelin):** 98.48 m (Jan Zelezny, Czech Republic, 1996)

Answer: (B) [Go Back to Q 44](#)

Solution 45.

Solution

Topic: International Sports Organisations – FIFA Headquarters

FIFA (Fédération Internationale de Football Association), the global governing body for association football (soccer), is headquartered in **Zurich, Switzerland**. FIFA was founded in Paris on **21 May 1904** and has its offices at FIFA-Strasse 20, Zurich. It currently has **211 member associations** (more than the United Nations). The FIFA Men's World Cup is held every four years; the Women's World Cup also every four years.

Answer: (D) [Go Back to Q 45](#)

Solution 46.

Solution

Topic: International Sports Organisations – ICC Headquarters

The **International Cricket Council (ICC)**, the global governing body for cricket, has its headquarters in **Dubai, United Arab Emirates (UAE)**. The ICC relocated its offices from Lord's Cricket Ground, London to **Dubai** in **2005**, primarily for tax and administrative reasons. The ICC oversees all major international cricket competitions including the Men's and Women's Cricket World Cups, ICC T20 World Cup, and the World Test



Championship.

Answer: (A) [Go Back to Q 46](#)

Solution 47.

Solution

Topic: Court of Arbitration for Sport (CAS)

The **Court of Arbitration for Sport (CAS)**, known in French as *Tribunal Arbitral du Sport* (TAS), is the highest international body for resolving sports-related legal disputes (doping appeals, eligibility, contract disputes, etc.). It is headquartered in **Lausanne, Switzerland** – also the home of the International Olympic Committee (IOC). CAS was established in 1984 and operates under the International Council of Arbitration for Sport (ICAS). Athletes can appeal CAS decisions only to the Swiss Federal Supreme Court.

Answer: (C) [Go Back to Q 47](#)

Solution 48.

Solution

Topic: India's National Sport

Field Hockey is traditionally recognised as India's **National Sport**. This is based on India's dominant historical record in Olympic hockey – India won **8 Olympic gold medals** in field hockey between **1928 (Amsterdam)** and **1980 (Moscow)**, including six consecutive golds (1928–1956). *Important note:* The Government of India has not officially designated any sport as the “National Sport” by any legislation or gazette notification; however, field hockey has been widely accepted as India's national sport due to its glorious Olympic legacy.

Answer: (B) [Go Back to Q 48](#)



Solution 49.

Solution

Topic: FIH Men's Hockey World Cup 2023

The **2023 FIH Men's Hockey World Cup** was held in **January 2023** at two venues in Odisha, India: the Kalinga Hockey Stadium (Bhubaneswar) and the newly built Birsamunda Hockey Stadium (Rourkela – with a capacity of 20,000, the world's largest hockey stadium). **Germany** won the championship by defeating **Belgium** in the final, claiming Germany's third World Cup title. This was also Germany's first World Cup win since 2006. India was eliminated at the quarterfinal stage.

Answer: (D) [Go Back to Q 49](#)

Solution 50.

Solution

Topic: Fitness Testing – Illinois Agility Run Test

The **Illinois Agility Run Test** was designed by **Cureton (1951)** and is one of the most widely used standardised tests for measuring **agility** – the ability to change body direction rapidly and accurately while maintaining speed and balance. **Course layout:** 10 m long, 5 m wide rectangle, with 4 central cones (spaced ≈ 3.3 m apart) for weaving. The athlete sprints around the perimeter and weaves through the central cones. Normative data are available for different age groups and sexes. Agility is distinct from speed (linear), strength, or aerobic capacity, though all contribute to overall athletic performance.

Answer: (A) [Go Back to Q 50](#)

ANSWER KEY – Sample Paper 6

Answer Key – MAH B.P.Ed CET Complete Sample Paper 6 of 8

Q.No	Ans	Q.No	Ans	Q.No	Ans	Q.No	Ans	Q.No	Ans
1	C	2	B	3	D	4	A	5	C
6	B	7	D	8	A	9	C	10	B
11	D	12	A	13	C	14	B	15	D
16	A	17	D	18	B	19	C	20	D
21	B	22	A	23	C	24	B	25	D
26	A	27	C	28	B	29	D	30	A
31	C	32	C	33	B	34	A	35	C
36	B	37	D	38	A	39	C	40	B
41	D	42	A	43	C	44	B	45	D
46	A	47	C	48	B	49	D	50	A

Option Distribution Summary:

Option	A	B	C	D	Total
Count	12	13	13	12	50

Total: 50 marks | No negative marking | All single-correct MCQs | +1 per correct answer

