IBA Karachi NTHP Free Practice Set A – 50 Questions

IBA Karachi National Talent Hunt Program · English & Mathematics · with answer key

Please read first

• Set A: 50 original MCQs (27 Mathematics, 23 English) by MCQsAI on the topics in the published NTHP test-preparation outline. Set A and Set B have completely different questions.

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• Suggested time: 60 minutes. Answer key and short explanations are on the last pages. Scan the QR to take the full timed test online with instant score.

Section	Questions
Mathematics	27
English	23
Total	**50**

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Mathematics

Q1. If the ratio of male to female employees in a government department is 7:3 and there are 210 male employees, what is the total number of employees?

A) 100
B) 90
C) 300
D) 490

Q2. If 3 men can complete a road construction project near Lahore in 12 days, how many days will 9 men take to complete the same project, assuming they work at the same rate?

A) 3 days
B) 9 days
C) 4 days
D) 6 days

Q3. A tailor in Lahore can stitch 3 shalwar kameez suits in 5 hours. How many suits can he stitch in 8 hours, assuming a consistent work rate?

A) 5 suits
B) 4.8 suits
C) 4.5 suits
D) 5.5 suits

Q4. A cylindrical water tank at an ASF training center has a radius of 7 meters and a height of 10 meters. If the tank is currently filled to 60% of its capacity, what is the volume of water (in cubic meters) in the tank? (Use π = 22/7)

A) 616 cubic meters
B) 1232 cubic meters
C) 1540 cubic meters
D) 924 cubic meters

Q5. A motorcyclist covers a distance of 45 km at an average speed of 60 km/h. How many minutes does the journey take?

A) 45 minutes
B) 35 minutes
C) 40 minutes
D) 30 minutes

Q6. If the price of petrol increases by 5% and its original price was PKR 125 per litre, what is the new price per litre?

A) PKR 133.75
B) PKR 131.25
C) PKR 135.00
D) PKR 132.50

Q7. What percentage of 40 is 30?

A) 75%
B) 80%
C) 50%
D) 25%

Q8. In a group of 80 students preparing for an FIA exam, 45 students opted for Mathematics, 35 for English, and 15 opted for both. How many students opted for neither Mathematics nor English?

A) 10
B) 25
C) 20
D) 15

Q9. Rs. 1,200 is divided between A and B in the ratio 3:5. What is B's share?
A) Rs. 600
B) Rs. 750
C) Rs. 450
D) Rs. 720

Q10. A grocer mixes two varieties of tea: one costing PKR 600 per kg and another costing PKR 800 per kg. If he wants to make a profit of 20% by selling the mixture at PKR 840 per kg, what is the ratio in which he should mix the two varieties?
A) 1:1
B) 1:3
C) 2:3
D) 3:2

Q11. An amount of Rs. 3,600 is to be divided among A, B, and C in the ratio 2:3:4 respectively. How much more does C get than A?
A) Rs. 1,600
B) Rs. 800
C) Rs. 400
D) Rs. 1,200

Q12. A shopkeeper offers a 10% discount on an item marked at PKR 2,500. If he still makes a profit of 12.5%, what is his cost price?
A) PKR 1,980
B) PKR 2,200
C) PKR 2,100
D) PKR 2,000

Q13. A shopkeeper in Saddar, Karachi, offers a 15% discount on a cricket bat marked at Rs. 3,000. What is the selling price of the bat?
A) Rs. 2,700
B) Rs. 2,850
C) Rs. 2,550
D) Rs. 2,400

Q14. Simplify the fraction 45/75 to its lowest terms.
A) 5/3
B) 9/15
C) 15/25
D) 3/5

Q15. Three siblings, Ali, Bilal, and Danish, share PKR 18,000. Ali receives 1/3 of the amount, Bilal receives 2/5 of the remaining amount, and Danish receives the rest. How much does Danish receive?
A) PKR 9,600
B) PKR 4,800
C) PKR 7,200
D) PKR 6,000

Q16. A bag contains 5 green, 3 red, and 2 blue marbles. If two marbles are drawn randomly without replacement, what is the probability that both marbles drawn are green?
A) 5/18
B) 1/2
C) 1/10
D) 2/9

Q17. What is the next term in the sequence: 2, 6, 12, 20, 30, ___?
A) 42
B) 40
C) 46
D) 44

Q18. Convert the fraction 3/8 into a decimal.

A) 0.38
B) 0.375
C) 0.37
D) 0.4

Q19. The ratio of male to female employees in a government department is 200:250. Simplify this ratio.

A) 4:3
B) 4:5
C) 5:4
D) 3:4

Q20. A rectangular plot of land in Lahore DHA Phase 5 has a length of 25 meters and a width of 12 meters. If a 1-meter wide pathway is built around the plot, what is the area of the pathway?

A) 82 sq meters
B) 90 sq meters
C) 86 sq meters
D) 78 sq meters

Q21. If a shirt costs Rs. 2,000 and its price is increased by 20%, what is the new price of the shirt?

A) Rs. 2,400
B) Rs. 2,600
C) Rs. 2,750
D) Rs. 2,500

Q22. The average monthly electricity bill for a household in Islamabad for the first three months of the year was PKR 3500. For the next two months, it was PKR 4200. What was the average monthly bill for the first five months?

A) PKR 3800
B) PKR 3780
C) PKR 3920
D) PKR 3850

Q23. A motorist drives at an average speed of 60 km/h. How long will it take him to cover a distance of 45 km?

A) 45 minutes
B) 75 minutes
C) 30 minutes
D) 60 minutes

Q24. A trader in Anarkali Bazaar, Lahore, buys an item for Rs. 800 and sells it for Rs. 960. What is the percentage profit?

A) 18%
B) 15%
C) 20%
D) 25%

Q25. A factory produces 500 units in 8 hours. At the same rate, how long will it take to produce 1250 units?

A) 15 hours
B) 12 hours
C) 18 hours
D) 20 hours

Q26. A sum of money is divided among Ali, Bilal, and Danish in the ratio 2:3:5. If Danish receives PKR 2500, what is the total sum of money?

A) PKR 12500
B) PKR 5000
C) PKR 7500
D) PKR 10000

Q27. If there are 48 male employees and 40 female employees in a government office, what is the ratio of male to female employees in its simplest form?

A) 6:5
B) 4:3
C) 5:6
D) 3:4

English

Q28. Choose the word that is most nearly synonymous with 'Pervasive':

A) Limited
B) Confined
C) Widespread
D) Scarce

Q29. Identify the antonym of 'Conspicuous':

A) Obscure
B) Illustrious
C) Prominent
D) Eminent

Q30. Choose the correctly spelled word often used in official government correspondence in Pakistan.

A) Corroborate
B) Corraborate
C) Corroberate
D) Coraborate

Q31. Choose the correct sentence: Neither the Chairman nor the members _____ present at the meeting.

A) is
B) was
C) has been
D) were

Q32. Convert the following into indirect speech: He said, 'I am going to Karachi tomorrow.'

A) He said that he goes to Karachi the next day.
B) He said that he was going to Karachi the next day.
C) He said he would go to Karachi tomorrow.
D) He said that I am going to Karachi tomorrow.

Q33. Complete the sentence with the most appropriate conjunction: _____ the heavy rains, the farmers were optimistic about a good harvest.

A) However
B) Moreover
C) Despite
D) Therefore

Q34. The public demanded that the government _____ more transparent in its dealings with international financial institutions.
A) is
B) be
C) was
D) were

Q35. Select the option that best completes the sentence: The new policy will have far-reaching _____ on the economy of Sindh.
A) effects
B) affect
C) effect
D) affects

Q36. Not only _____ the Federal Board of Revenue streamline the tax collection process, but it also introduced digital payment gateways for greater convenience.
A) did
B) is
C) has
D) was

Q37. Which of the following words is spelled correctly?
A) Governmentt
B) Gouvernment
C) Goverment
D) Government

Q38. Choose the correct indirect speech transformation of: 'He said, 'I will visit Islamabad next week.''
A) He said that he will visit Islamabad next week.
B) He said that I would visit Islamabad the following week.
C) He said he would visit Islamabad next week.
D) He said that he would visit Islamabad the following week.

Q39. The newly appointed CEO promised to _____ the challenges facing Pakistan's textile industry.
A) take up
B) take out
C) take on
D) take off

Q40. Convert the following into indirect speech: The teacher said to the students, "Have you finished your assignments?"
A) The teacher asked the students have they finished their assignments.
B) The teacher asked the students if they finished their assignments.
C) The teacher asked the students did they finish their assignments.
D) The teacher asked the students if they had finished their assignments.

Q41. Choose the antonym of 'Lethargic'.
A) active
B) diligent
C) prompt
D) careless

Q42. Select the sentence that demonstrates correct subject-verb agreement.
A) The data collected from all provinces is crucial for the census.
B) The data collected from all provinces have crucial for the census.
C) The data collected from all provinces being crucial for the census.
D) The data collected from all provinces be crucial for the census.

Q43. Which of the following is the correct plural form of 'criterion'?
A) criterian
B) criterions
C) criterii
D) criteria

Q44. Choose the word that is most nearly opposite in meaning to 'Emasculate':
A) Strengthen
B) Consolidate
C) Diminish
D) Amplify

Q45. Had it not _____ the concerted efforts of law enforcement agencies, the terror plot in Karachi would have been successfully executed.
A) been by
B) been for
C) been to
D) been of

Q46. Identify the sentence with correct spelling and grammar.
A) The government has implemented strinjent measures to curb inflation.
B) The government has implemented stringent measures to curb inflation.
C) The government has implemented stringant measures to curb inflation.
D) The government has implemented stringent mesures to curb inflation.

Q47. Correct the sentence: 'Despite of the heavy rain, they continued their journey to Murree.'
A) Despite for the heavy rain, they continued their journey to Murree.
B) Despite of the heavy rain, they continue their journey to Murree.
C) Despite the heavy rain, they continued their journey to Murree.
D) In spite the heavy rain, they continued their journey to Murree.

Q48. Identify the grammatically correct sentence.
A) In spite his hard work, he failed.
B) Despite of his hard work, he failed.
C) Despite his hard work, he failed.
D) Although his hard work, he failed.

Q49. Despite repeated warnings, the illegal construction continued, much to the ____ of the local residents.
A) appreciation
B) delight
C) chagrin
D) satisfaction

Q50. Choose the correct passive voice for the sentence: 'The government is initiating several development projects in the region.'
A) Several development projects were initiated by the government in the region.
B) Several development projects are being initiated by the government in the region.
C) Several development projects have been initiated by the government in the region.
D) The government is initiating several development projects in the region.

Answer Key

Q1: C	Q2: C	Q3: B	Q4: D	Q5: A	Q6: B	Q7: A	Q8: D	Q9: B	Q10: A
Q11: B	Q12: D	Q13: C	Q14: D	Q15: C	Q16: D	Q17: A	Q18: B	Q19: B	Q20: D
Q21: A	Q22: B	Q23: A	Q24: C	Q25: D	Q26: B	Q27: A	Q28: C	Q29: A	Q30: A

Q31: D	Q32: B	Q33: C	Q34: B	Q35: A	Q36: A	Q37: D	Q38: D	Q39: C	Q40: D
Q41: A	Q42: A	Q43: D	Q44: A	Q45: B	Q46: B	Q47: C	Q48: C	Q49: C	Q50: B

Next step

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Explanations

Q1 · C · Percentages and Ratios · medium
Let the number of male employees be 7x and female employees be 3x. Given 7x = 210, so x = 210/7 = 30. Number of female employees = 3x = 3 * 30 = 90. Total employees = 210 + 90 = 300.

Q2 · C · Time and Work Problems · medium
This is an inverse proportion problem. (Men1 * Days1) = (Men2 * Days2). So, 3 * 12 = 9 * Days2. 36 = 9 * Days2. Days2 = 36 / 9 = 4 days.

Q3 · B · Ratios and Proportions · easy
First, find the tailor's rate per hour: 3 suits / 5 hours = 0.6 suits/hour. Then, multiply this rate by 8 hours: 0.6 suits/hour * 8 hours = 4.8 suits.

Q4 · D · Geometry (Spherical and Planar applications) · medium
The volume of a cylinder is given by V = πr^2h. V = (22/7) * (7^2) * 10 = (22/7) * 49 * 10 = 22 * 7 * 10 = 1540 cubic meters. 60% of 1540 = 0.60 * 1540 = 924 cubic meters.

Q5 · A · Time, Speed, and Distance · medium
Time = Distance / Speed. Time = 45 km / 60 km/h = 0.75 hours. To convert to minutes, multiply by 60: 0.75 * 60 = 45 minutes.

Q6 · B · Percentages · medium
Increase = 5% of 125 = 6.25. New price = 125 + 6.25 = PKR 131.25.

Q7 · A · Fractions, Decimals, and Percentages · easy
(30 / 40) \times 100 = (3/4) \times 100 = 0.75 \times 100 = 75%.

Q8 · D · Mathematical Logic and Sequences · hard
Students opted for only Mathematics = 45 - 15 = 30. Students opted for only English = 35 - 15 = 20. Students opted for at least one subject = (Only Math) + (Only English) + (Both) = 30 + 20 + 15 = 65. Total students = 80. Students opted for neither = Total - (At least one) = 80 - 65 = 15.

Q9 · B · Ratios and Proportions · medium
B = 5/8 × 1200 = 750.

Q10 · A · Ratios and Proportions · hard
Cost price of mixture = 840 / 1.2 = PKR 700. By alligation: (800 - 700) : (700 - 600) = 100 : 100 = 1 : 1.

Q11 · B · Ratios and Proportions · medium
Total ratio parts = 2 + 3 + 4 = 9. Share of A = (2/9) * 3600 = Rs. 800. Share of C = (4/9) * 3600 = Rs. 1,600. Difference = C's share - A's share = Rs. 1,600 - Rs. 800 = Rs. 800.

Q12 · D · Percentages, Profit and Loss · hard
Marked Price = PKR 2,500. Discount = 10% of 2,500 = 250. Selling Price = 2,500 - 250 = PKR 2,250. Let Cost Price = C. Profit = 12.5%, so Selling Price = C + 0.125C = 1.125C. Thus, 1.125C = 2,250. C = 2,250 / 1.125 = PKR 2,000.

Q13 · C · Percentages · easy
Discount amount = 15% of Rs. 3,000 = (15/100) * 3,000 = Rs. 450. Selling price = Marked price - Discount = 3,000 - 450 = Rs. 2,550.

Q14 · D · Fractions and Decimals · easy
Divide both numerator and denominator by their greatest common divisor, which is 15. 45 ÷ 15 = 3, 75 ÷ 15 = 5. So, 3/5.

Q15 · C · Fractions and Decimals · hard
Total amount = PKR 18,000. Ali's share = (1/3) * 18,000 = PKR 6,000. Remaining amount after Ali = 18,000 - 6,000 = PKR 12,000. Bilal's share = (2/5) * 12,000 = PKR 4,800. Danish's share = Remaining amount - Bilal's share = 12,000 - 4,800 = PKR 7,200.

Q16 · D · Probability · medium
Total marbles = 5+3+2 = 10. Probability of first marble being green = 5/10 = 1/2. After drawing one green marble, 9 marbles remain, 4 of which are green. Probability of second marble being green = 4/9. Combined probability = (1/2) * (4/9) = 4/18 = 2/9.

Q17 · A · Mathematical Logic and Sequences · easy
The differences between consecutive terms are: 6-2=4, 12-6=6, 20-12=8, 30-20=10. The differences are increasing by 2 each time (4, 6, 8, 10). So the next difference should be 12. Therefore, the next term is 30 + 12 = 42.

Q18 · B · Fractions and Decimals · easy
To convert a fraction to a decimal, divide the numerator by the denominator: 3 ÷ 8 = 0.375.

Q19 · B · Ratios, Proportions, and Rates · easy
Divide both numbers by their greatest common divisor, which is 50. 200 \div 50 = 4 and 250 \div 50 = 5. So the simplified ratio is 4:5.

Q20 · D · Geometry (Area, Perimeter, Angles) · hard
Area of the plot = Length * Width = 25 * 12 = 300 sq meters. When a 1-meter wide pathway is built around it, the new length becomes 25 + 1 + 1 = 27 meters, and the new width becomes 12 + 1 + 1 = 14 meters. Area of the plot with pathway = 27 * 14 = 378 sq meters. Area of the pathway = (Area of plot with pathway) - (Area of plot) = 378 - 300 = 78 sq meters.

Q21 · A · Percentages · easy
Increase amount = 20% of Rs. 2,000 = (20/100) * 2000 = Rs. 400. New price = Original price + Increase amount = 2000 + 400 = Rs. 2,400.

Q22 · B · Averages · hard
Total bill for first 3 months = 3500 * 3 = PKR 10500. Total bill for next 2 months = 4200 * 2 = PKR 8400. Total bill for 5 months = 10500 + 8400 = PKR 18900. Average bill for 5 months = 18900 / 5 = PKR 3780.

Q23 · A · Time, Speed, and Distance · medium
Time = Distance / Speed. Time = 45 km / 60 km/h = 0.75 hours. To convert hours to minutes, multiply by 60: 0.75 * 60 = 45 minutes.

Q24 · C · Percentages · medium
Profit = Selling Price - Cost Price = 960 - 800 = Rs. 160. Percentage Profit = (Profit / Cost Price) * 100 = (160 / 800) * 100 = (1/5) * 100 = 20%.

Q25 · D · Ratios and Proportions · medium
Units per hour = 500 / 8 = 62.5 units/hour. Time to produce 1250 units = 1250 / 62.5 = 20 hours.

Q26 · B · Ratios, Proportions, and Rates · medium
Danish's share is 5 parts, which is PKR 2500. So, 1 part = 2500 / 5 = PKR 500. Total parts = 2 + 3 + 5 = 10 parts. Total sum = 10 \u00d7 500 = PKR 5000.

Q27 · A · Ratios and Proportions · medium
The ratio is 48:40. Divide both numbers by their greatest common divisor, which is 8. 48/8 = 6 and 40/8 = 5. So the ratio is 6:5.

Q28 · C · Advanced Vocabulary (Synonyms & Antonyms) · easy
'Pervasive' means spreading widely throughout an area or a group of people. 'Widespread' is its closest synonym.

Q29 · A · Vocabulary (Synonyms & Antonyms) · medium
'Conspicuous' means standing out so as to be clearly visible or attracting notice. 'Obscure' means not discovered or known about; uncertain. Therefore, 'Obscure' is the most direct antonym.

Q30 · A · Vocabulary and Spellings · medium
'Corroborate' means to confirm or give support to (a statement, theory, or finding).

Q31 · D · Grammar & Syntax · medium
When 'neither...nor' connects two subjects, the verb agrees with the subject closer to it. Here, 'members' is plural, so 'were' is correct.

Q32 · B · Direct / Indirect Narrations · medium
The present continuous tense in direct speech changes to past continuous in indirect speech, and 'tomorrow' changes to 'the next day' or 'the following day'.

Q33 · C · Prepositions and Conjunctions · medium
'Despite' is followed by a noun phrase ('the heavy rains') and shows contrast. 'Although' would need a full clause.

Q34 · B · Complex Subjunctive · easy
The verb 'demanded' (a verb of command/request) triggers the subjunctive mood, requiring the base form of the verb 'to be' (be) regardless of the subject's number or person.

Q35 · A · Grammar · medium
'Effects' (noun) means results or consequences, which is appropriate in this context. 'Affect' is typically a verb.

Q36 · A · Correlative Inversion · easy
When 'not only' begins a sentence, it triggers subject-auxiliary inversion. The past tense 'streamline' indicates that 'did' is the correct auxiliary verb.

Q37 · D · Spellings · easy
'Government' is the correct spelling.

Q38 · D · Direct & Indirect Speech · easy
When converting direct speech to indirect speech, 'will' changes to 'would', and 'next week' changes to 'the following week'. The pronoun 'I' changes to 'he'.

Q39 · C · Phrasal Verbs · easy
'Take on' means to accept a responsibility or challenge.

Q40 · D · Direct and Indirect Speech · hard
When converting an interrogative sentence (yes/no question) into indirect speech, 'said to' changes to 'asked', 'if' or 'whether' is used, and the tense shifts. 'Have finished' (Present Perfect) changes to 'had finished' (Past Perfect).

Q41 · A · Vocabulary (Synonyms and Antonyms) · easy
Lethargic means sluggish or lacking energy. The antonym is 'active', meaning energetic and engaged.

Q42 · A · Grammar and Punctuation · hard
Only A has a complete, correct verb: 'data ... is crucial'. B, C and D use a wrong verb form.

Q43 · D · Grammar · hard
'Criterion' is a Greek-derived word, and its plural form is 'criteria'.

Q44 · A · Advanced Vocabulary (Synonyms & Antonyms) · medium
'Emasculate' means to make someone or something weaker or less effective. 'Strengthen' means to make or become stronger, making it the antonym.

Q45 · B · Complex Subjunctive and Conditional Syntax · hard
The phrase 'Had it not been for...' is a common conditional inversion used to express that something would not have happened without a particular circumstance or person.

Q46 · B · Vocabulary and Spellings · hard
'Stringent' means strict or severe. 'Measures' is the correct spelling for actions taken. All other options contain spelling errors.

Q47 · C · Sentence Correction and Structuring · hard
'Despite' does not take 'of'. The correct phrase is either 'despite' or 'in spite of'.

Q48 · C · Grammar Usage · medium
'Despite' does not take 'of'. 'In spite' must be followed by 'of'. 'Although' requires a clause, not just a noun phrase. Therefore, 'Despite his hard work, he failed.' is correct.

Q49 · C · Vocabulary · hard
'Chagrin' means distress or embarrassment at having failed or been humiliated. It fits the context of residents being annoyed or upset by illegal construction.

Q50 · B · Grammar Usage · hard
The active sentence is present continuous (is initiating). Its passive is: object + is/are + being + past participle + by + subject, so 'are being initiated'.