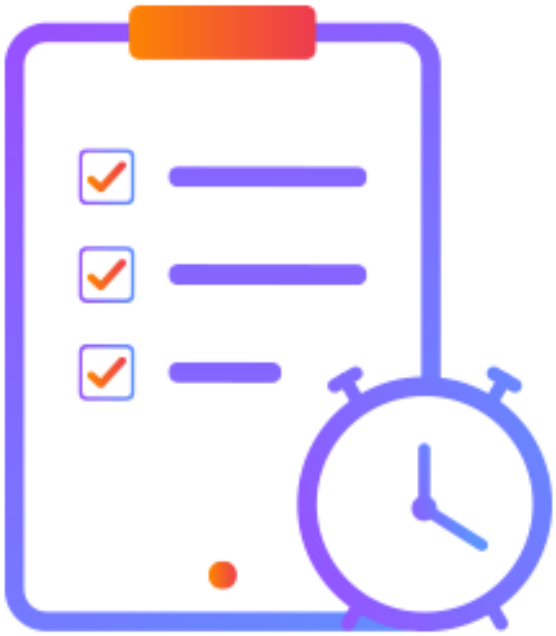
BYJU'S EXAM PREP



New Pattern

Mock Test Questions & Solutions

Mock Test Solutions in English

Questions

1. **Direction:** In a certain instruction system the different computation processes are written as follows:

   (i) x & y >> z means z is subtracted from the product of x and y.

   (ii) x @ y % z means x is multiplied by the sum of y and z.

   (iii) x ! y e z means z is subtracted from y and the resultant is added to x.

   (iv) x © y # z means y is divided by z and the resultant is added to the square of x.

   17 & 4 >> 8 = l

   7 © l # 15 = ?

   A. 58 B. 53

   C. 23 D. 51

   E. None of these

2. 13 @ 4 % 3 = a

   a & 5 >> 55 = ?

   A. 45 B. 350

   C. 340 D. 400

   E. 273

3. d & 15 >> 18 = 42

   d © 36 # 9 = ?

   A. 12 B. 16

   C. 20 D. 18

   E. 14

4. 5 © 49 # 7 = k

k ! 87 e 29 = ?

A. 118
B. 108
C. 98
D. 80
E. 90

5. f ! 78 e 56 = 50

f @ 7 % 13 = ?

A. 560
B. 56
C. 280
D. 190
E. None of these

6. **Direction:** Study the following information carefully to give the answers of the questions based on it.

All the even numbers on a 12-hour clock are represented by a, b, c, d, e & f in ascending order and all the odd numbers are represented by g, h, i, j, k & l in ascending order. A car leaves from place X when hour hand is exactly pointing at ‘c’, and reaches place Y when the hour hand is pointing between ‘k’ and ‘e’ and minute hand is pointing at ‘j’. How much time did the car take to reach from X to Y? (Consider both the times in a.m.)

A. 3 hours 10 minutes
B. 3 hours 15 minutes
C. 3 hours 25 minutes
D. 3 hours 35 minutes
E. None of these

7. When a flight took off from Mumbai to Dubai in the afternoon, the hour hand was pointing exactly at ’j’. As Mumbai is 1 hour 30 minutes ahead of Dubai and the duration of the flight was 3 hours and 15 minutes, what will be the hour hand and the minute hand pointing at when the flight reaches Dubai?

A. Hour hand between ‘d’ & ‘k’ and minute hand at ‘k’
B. Hour hand between ‘k’ & ‘e’ and minute hand at ‘d’
C. Hour hand between ‘j’ & ‘d’ and minute hand at ‘k’
D. Hour hand between ‘e’ & ‘l’ and minute hand at ‘d’
E. None of these

8. If a clock is 45 minutes slow and the correct time is 12:30 p.m., then what would the clock show at this time?

A. Hour hand between ‘e’ & ‘l’ and minute hand at ‘k’
B. Hour hand between ‘d’ & ‘k’ and minute hand at ‘k’
C. Hour hand between ‘l’ & ‘f’ and minute hand at ‘k’
D. Hour hand between ‘c’ & ‘j’ and minute hand at ‘k’
E. None of these

9. Tap P fills a tank in 30 minutes and tap Q fills in 60 minutes. Both the taps are opened simultaneously when the hour hand is exactly at d, at what time will the tank be filled fully?

A. Hour hand between ‘d’ & ‘k’ and minute hand at ‘b’
B. Hour hand between ‘e’ & ‘l’ and minute hand at ‘h’
C. Hour hand between ‘l’ & ‘f’ and minute hand at ‘j’
D. Hour hand between ‘c’ & ‘j’ and minute hand at ‘d’
E. None of these

10. An air conditioner consumes 0.5 units per hour. Every day the AC operates form the time where hour hand is exactly at ‘e’ a.m. to the time where hour hand is exactly at ‘i’ p.m. Find the units off consumption in the month of September?

A. 75 units
B. 80 units
C. 105 units
D. 90 units
E. None of these

11. **Direction:** Study the information given below and answer the questions based on it.

# means either hour hand or minute hand is at 9
$ means either hour hand or minute hand is at 2
@ means either hour hand or minute hand is at 3
& means either hour hand or minute hand is at 5
% means either hour hand or minute hand is at 12
+ means either hour hand or minute hand is at 8

Note: If two symbols are given then by default first symbol is considered as the hour hand and the second one is considered as the minute hand. And all time is considered at AM.

For eg. #@ ⟶ 9:15 am A train takes 2 hours to go from Station A to Station B. It the train starts at @+ from Station A then at what time will it reach Station B?

A. +&
B. $+
C. %$
D. &+
E. #$

12. Rohit starts from home for school at ‘+$’. It takes him 30 minute to reach his school. At what time he reaches his school?

A. %+
B. ++

C. + @
D. #+
E. $#

13. Rahul has to catch a train that is scheduled to depart at '@#'. It takes him 3 hour and 20 minutes to reach the railway station from his homE. At what time should he leave from his home for the railway station to arrive at the station at least 25 minutes before the departure of the train?
A. +$
B. &%
C. &$
D. &&
E. %%

14. Train is scheduled to start at '$ @'. A passenger reaches the station 25 minutes after the departure of the train. At what time does the passenger reach the station?
A. +%
B. $+
C. # @
D. &%
E. @ $

15. A bus is scheduled to start at '#$' from the bus stand. If Anil reaches the bus stand 25 minutes before the schedule time, then at what time Anil reaches the bus stand?
A. +%
B. +#
C. #+
D. &$
E. @ &

Solutions

1. B

Sol. Given,

1) 17 & 4 >> 8 = I

Instruction (i) is applicable here i.e. x & y >> z means z is subtracted from the product of x and y.

(17 × 4) – 8 = 68 – 8 = 60

So, I = 60.

2) 7 © I # 15

Replace "I" with "60"

7 © 60 # 15

Instruction (iv) is applicable here i.e. x © y # z means y is divided by z and the resultant is added to square of x.

(60 ÷ 15) + 7^2 = 4 + 49 = 53

Hence, the resultant is 53.

2. D

Sol. Given,

1) 13 @ 4 % 3 = a

Instruction (ii) is applicable here i.e. x @ y % z means x is multiplied by the sum of y and z.

(4 + 3) × 13 = 7 × 13 = 91

So, a = 91

2) a & 5 >> 55

Replace “a” with “91”.

91 & 5 >> 55

Instruction (i) is applicable here i.e. x & y >> z means z is subtracted from the product of x and y.

(91 × 5) – 55 = 455 – 55 = 400

Hence, the resultant is 400.

3. C

Sol. Given,

1) d & 15 >> 18 = 42

Instruction (i) is applicable here i.e. x & y >> z means z is subtracted from the product of x and y.

(d × 15) – 18 = 42

15d = 42 + 18

15d = 60

d = 60 ÷ 15 = 4

So, d = 4

2) d © 36 # 9

Replace “d” with “4”

4 © 36 # 9

Instruction (iv) is applicable here i.e. x © y # z means y is divided by z and the resultant is added to square of x.

(36 ÷ 9) + 4^2 = 4 + 16 = 20

Hence, the resultant is 20.

4. E

Sol. Given,

1) 5 © 49 # 7 = k

Instruction (iv) is applicable here i.e. x © y # z means y is divided by z and the resultant is added to square of x.

$(49 \div 7) + 5^2 = 7 + 25 = 32$

So, k = 32

2) k ! 87 e 29

Replace “k” with “32”

32 ! 87 e 29

Instruction (iii) is applicable here i.e. x ! y e z means z is subtracted from y and the resultant is added to x.

(87 – 29) + 32 = 58 + 32 = 90

Hence, the resultant is 90.

5. A

Sol. Given,

1) f ! 78 e 56 = 50

Instruction (iii) is applicable here i.e. x ! y e z means z is subtracted from y and the resultant is added to x.

(78 – 56) + f = 50

f = 50 – 22 = 28

So, f = 28

2) f @ 7 % 13

Replace “f” with “28”

28 @ 7 % 13

Instruction (ii) is applicable here i.e. x @ y % z means x is multiplied by the sum of y and z.

28 × (7 + 13) = 560

Hence, the resultant is 560.

6. D

Sol. As the hour hand is exactly pointing at c, i.e. 6 it means the car left X at 6 a.m. When the car reached Y the hour hand was pointing between k and e i.e. 9 and 10 and the minute hand was pointing at j i.e. 7, therefore the time is 9:35 a.m. Thus the time taken by the car is 3 hours 35 minutes.

7. A

Sol. Flight took off from Mumbai when the hour hand was pointing at j i.e. 7 p.m. in Mumbai and therefore the time in Dubai would be 1 hour 30 min behind i.e. 5:30 p.m. As the duration of the flight is 3hrs 15min, flight reaches Dubai at 8:45 p.m. Thus the hour hand is pointing between d & k (8 & 9) and minute hand is pointing at k (9).

8. C

Sol. As the clock 45 minutes too slow therefore it will indicate 11:45 a.m. which means hour hand will point between l & f (11 & 12) and minute hand will point at k (9).

9. A

Sol. Let’s assume that the capacity of the tank is 60 units (LCM of 30 and 60).

Tap P fills in 1 minute = 60/30 = 2 units

Tap Q fills in 1 minute = 60/60 = 1 unit

Tap (P+Q) fill in 1 minute = 2 + 1 = 3 units

So, 60 units filled by (P+Q) in = 60/3 = 20 minutes

As given the taps start at 8:00 therefore it fills at 8:20.

So, hour hand between ‘d’ and ‘k’ and minute hand at ‘b’.

10. C

Sol. The Ac operates from 10:00 a.m. to 5:00 p.m. i.e. for 7 hrs. The month of September has 30 days.
Therefore the total power consumption is 7 x 30 x 0.5 = 105 units.

11. D

Sol. Train starts from Station A at 3 hour 40 minute = @+
Train reaches Station B at 3 hour 40 minute + 2 hour = 5 hour 40 minute = &+

12. B

Sol. Rohit starts from home at 8 hour 10 minute = +$
He reaches his school at 8 hour 10 minute + 30 minute = 8 hour 40 minute = 8:40 am = ++

13. E

Sol. Scheduled time of departure of train = @# = 3:45 am
Time for travel including the early arrival = 3 hour 20 minutes + 25 minutes = 3 hour 45 minutes
3:45 pm – 3 hour 45 minutes = 12 hour = %%

14. B

Sol. Train Schedule time = $ @ = 2:15 am.
Time at which the passenger reaches the station = 2 hour 15 minute + 25 minute
= 2 hour 40 minutes = $+

15. B

Sol. Bus schedule time = #$ = 9 hour 10 minute
Anil reaches the bus stand = 9 hour 10 minute – 25 minute = 8 hour 45 minute = +#

Mock Test Solutions in Hindi

Questions

1. **निर्देश:** एक निश्चित निर्देश प्रणाली में विभिन्न गणना प्रक्रियाएं निम्नलिखित प्रकार से होती हैं:

(i) x & y >> z का अर्थ है z को x और y के गुणनफल से घटाया जाता है।

(ii) x @ y % z का अर्थ है x में y और z के योगफल का गुणा किया जाता है।

(iii) x ! y e z का अर्थ है z को y से घटाया जाता है और परिणामी को x में जोड़ा जाता है।

(iv) x © y # z का अर्थ है y को z से विभाजित किया जाता है और परिणामी को x के वर्ग में जोड़ा जाता है।

17 & 4 >> 8 = l

7 © l # 15 = ?

A. 58
B. 53
C. 23
D. 51
E. इनमें से कोई नहीं

2. 13 @ 4 % 3 = a

a & 5 >> 55 = ?

A. 45
B. 350
C. 340
D. 400
E. 273

3. d & 15 >> 18 = 42

d © 36 # 9 = ?

A. 12
B. 16
C. 20
D. 18
E. 14

4. 5 © 49 # 7 = k

k ! 87 e 29 = ?

A. 118
B. 108
C. 98
D. 80
E. 90

5. f ! 78 e 56 = 50

f @ 7 % 13 = ?

A. 560
B. 56
C. 280
D. 190
E. इनमें से कोई नहीं

6. **निर्देश**: निम्नलिखित जानकारी का ध्यानपूर्वक अध्ययन कीजिए और इस पर आधारित प्रश्नों के उत्तर दीजिए।

एक 12 घंटे वाली घड़ी में सभी सम संख्याओं को a, b, c, d, e और f से बढ़ते क्रम में दर्शाया गया है तथा सभी विषम संख्याओं को g, h, i, j, k और l में बढ़ते क्रम में दर्शाया गया है।

एक कार स्थान X से तब निकलती है जब घड़ी में घंटे की सुई ठीक 'c' पर होती है और वह स्थान Y पर तब पहुंचती है जब घड़ी में घंटे की सुई 'k' और 'e' के बीच होती है और मिनट की सुई 'j' पर होती है। X से Y तक जाने में कार को कितना समय लगा? (दोनों समयों को AM में मानकर चलें।)

A. 3 घंटे 10 मिनट
B. 3 घंटे 15 मिनट
C. 3 घंटे 25 मिनट
D. 3 घंटे 35 मिनट
E. इनमें से कोई नहीं

7. जब एक फ्लाइट दोपहर में मुंबई से दुबई के लिए उड़ान भरती है तब घड़ी में घंटे की सुई ठीक 'j' पर थी। क्योंकि मुंबई दुबई से 1 घंटा 30 मिनट आगे है और उड़ान का समय 3 घंटा 15 मिनट था, तो फ्लाइट के दुबई पहुंचने पर घड़ी में घंटे और मिनट की सुई कहां पर होगी?

A. घंटे की सुई 'd' एवं 'k' के बीच होगी और मिनट की सुई 'k' पर होगी
B. घंटे की सुई 'k' एवं 'e' के बीच होगी और मिनट की सुई 'd' पर होगी
C. घंटे की सुई 'j' एवं 'd' के बीच होगी और मिनट की सुई 'k' पर होगी
D. घंटे की सुई 'e' एवं 'l' के बीच होगी और मिनट की सुई 'd' पर होगी
E. इनमें से कोई नहीं

8. यदि एक घड़ी 45 मिनट देरी से चल रही है और सही समय दोपहर के 12:30 बजे है, तो घड़ी इस समय पर क्या समय दिखाएगी?

A. घंटे की सुई 'e' एवं 'l' के बीच होगी और मिनट की सुई 'k' पर होगी
B. घंटे की सुई 'd' एवं 'k' के बीच होगी और मिनट की सुई 'k' पर होगी
C. घंटे की सुई 'l' एवं 'f' के बीच होगी और मिनट की सुई 'k' पर होगी
D. घंटे की सुई 'c' एवं 'j' के बीच होगी और मिनट की सुई 'k' पर होगी

E. इनमें से कोई नहीं

9. नल P एक टंकी को 30 मिनट में भरता है और नल Q उसी टंकी को 60 मिनट में भरता है। दोनों नलों को एक-साथ खोला जाता है जब घड़ी में घंटे की सुई ठीक 'd' पर होती है, पूरी टंकी कितनी देर में भर जाएगी?

A. घंटे की सुई 'd' एवं 'k' के बीच होगी और मिनट की सुई 'b' पर होगी

B. घंटे की सुई 'e' एवं 'l' के बीच होगी और मिनट की सुई 'h' पर होगी

C. घंटे की सुई 'l' एवं 'f' के बीच होगी और मिनट की सुई 'j' पर होगी

D. घंटे की सुई 'c' एवं 'j' के बीच होगी और मिनट की सुई 'd' पर होगी

E. इनमें से कोई नहीं

10. एक एयर कंडीशनर प्रति घंटा 0.5 यूनिट खर्च करता है। रोजाना AC उस समय से शुरु होता है जब घंटे की सुई ठीक प्रातः 'e' बजे पर होती है और यह तब तक चलता है जब घंटे की सुई सायं 'l' पर आ जाती है। सितम्बर के महीने में खर्च हुई यूनिट ज्ञात कीजिए?

A. 75 यूनिट

B. 80 यूनिट

C. 105 यूनिट

D. 90 यूनिट

E. इनमें से कोई नहीं

11. **निर्देश:** नीचे दी गई जानकारी का ध्यानपूर्वक अध्ययन करें तथा इसके आधार पर प्रश्नों के उत्तर दें।

का अर्थ है या तो घंटे की सुई या मिनट की सुई 9 पर है
$ का अर्थ है या तो घंटे की सुई या मिनट की सुई 2 पर है
@ का अर्थ है या तो घंटे की सुई या मिनट की सुई 3 पर है
& का अर्थ है या तो घंटे की सुई या मिनट की सुई 5 पर है
% का अर्थ है या तो घंटे की सुई या मिनट की सुई 12 पर है
+ का अर्थ है या तो घंटे की सुई या मिनट की सुई 8 पर है

नोट: यदि दो प्रतीक दिए गए हैं तो स्वत: ही पहले प्रतीक को घंटे की सुई के रूप में तथा दूसरे को मिनट की सुई के रूप में माना जाता है। और सभी समय को पूर्वाह्न (A.M.) के रूप में माना जाता है।

For eg. #@ ⟶ 9:15 am एक ट्रेन स्टेशन A से स्टेशन B तक जाने में 2 घंटे लेती है। यदि ट्रेन स्टेशन A से @+ बजे चली तो वे स्टेशन B पर कितने बजे पहुंच जाएगी?

A. +&

B. $+

C. %$

D. &+

E. #$

12. रोहित घर से '+$' पर स्कूल के लिए निकला। उसने अपने स्कूल पहुंचने में 30 मिनट लिए। वह अपने स्कूल कितने बजे पहुंचा?

A. %+

B. ++

C. + @ D. #+

E. $#

13. राहुल को एक ट्रेन पकड़नी है जिसका प्रस्थान समय '@ #' पर निर्धारित है। उसे अपने घर से रेलवे स्टेशन तक पहुंचने में 3घंटे और 20 मिनट का समय लगता है। उसे ट्रेन के प्रस्थान समय से कम से कम 25 मिनट पहले रेलवे स्टेशन पर पहुंचने के लिए अपने घर से कितने बजे निकलना चाहिए?

A. +$ B. &%

C. &$ D. &&

E. %%

14. ट्रेन का प्रस्थान समय '$ @' पर निर्धारित है। एक यात्री ट्रेन के प्रस्थान के 25मिनट बाद स्टेशन पर पहुंचता है। यात्री किस समय स्टेशन पर पहुंचता है ?

A. +% B. $+

C. # @ D. &%

E. @ $

15. एक बस, बस स्टैंड से '#$' बजे निकलनी निर्धारित है। यदि अनिल बस के निर्धारित समय से 25मिनट पहले बस स्टैंड पर पहुंचता है, तो अनिल कितने बजे बस स्टैंड पर पहुंचा?

A. +% B. +#

C. #+ D. &$

E. @ &

Solutions

1. B

Sol. Given,

1) 17 & 4 >> 8 = I

Instruction (i) is applicable here i.e. x & y >> z means z is subtracted from the product of x and y.

(17 × 4) – 8 = 68 – 8 = 60

So, I = 60.

2) 7 © I # 15

Replace "I" with "60"

7 © 60 # 15

Instruction (iv) is applicable here i.e. x © y # z means y is divided by z and the resultant is added to square of x.

(60 ÷ 15) + 7^2 = 4 + 49 = 53

Hence, the resultant is 53.

2. D

Sol. Given,

1) 13 @ 4 % 3 = a

Instruction (ii) is applicable here i.e. x @ y % z means x is multiplied by the sum of y and z.

(4 + 3) × 13 = 7 × 13 = 91

So, a = 91

2) a & 5 >> 55

Replace “a” with “91”.

91 & 5 >> 55

Instruction (i) is applicable here i.e. x & y >> z means z is subtracted from the product of x and y.

(91 × 5) – 55 = 455 – 55 = 400

Hence, the resultant is 400.

3. C

Sol. Given,

1) d & 15 >> 18 = 42

Instruction (i) is applicable here i.e. x & y >> z means z is subtracted from the product of x and y.

(d × 15) – 18 = 42

15d = 42 + 18

15d = 60

d = 60 ÷ 15 = 4

So, d = 4

2) d © 36 # 9

Replace “d” with “4”

4 © 36 # 9

Instruction (iv) is applicable here i.e. x © y # z means y is divided by z and the resultant is added to square of x.

(36 ÷ 9) + 4^2 = 4 + 16 = 20

Hence, the resultant is 20.

4. E

Sol. Given,

1) 5 © 49 # 7 = k

Instruction (iv) is applicable here i.e. x © y # z means y is divided by z and the resultant is added to square of x.

$(49 \div 7) + 5^2 = 7 + 25 = 32$

So, k = 32

2) k ! 87 e 29

Replace “k” with “32”

32 ! 87 e 29

Instruction (iii) is applicable here i.e. x ! y e z means z is subtracted from y and the resultant is added to x.

(87 – 29) + 32 = 58 + 32 = 90

Hence, the resultant is 90.

5. A

Sol. Given,

1) f ! 78 e 56 = 50

Instruction (iii) is applicable here i.e. x ! y e z means z is subtracted from y and the resultant is added to x.

(78 – 56) + f = 50

f = 50 – 22 = 28

So, f = 28

2) f @ 7 % 13

Replace “f” with “28”

28 @ 7 % 13

Instruction (ii) is applicable here i.e. x @ y % z means x is multiplied by the sum of y and z.

28 × (7 + 13) = 560

Hence, the resultant is 560.

6. D

Sol. As the hour hand is exactly pointing at c, i.e. 6 it means the car left X at 6 a.m. When the car reached Y the hour hand was pointing between k and e i.e. 9 and 10 and the minute hand was pointing at j i.e. 7, therefore the time is 9:35 a.m. Thus the time taken by the car is 3 hours 35 minutes.

7. A

Sol. Flight took off from Mumbai when the hour hand was pointing at j i.e. 7 p.m. in Mumbai and therefore the time in Dubai would be 1 hour 30 min behind i.e. 5:30 p.m. As the duration of the flight is 3hrs 15min, flight reaches Dubai at 8:45 p.m. Thus the hour hand is pointing between d & k (8 & 9) and minute hand is pointing at k (9).

8. C

Sol. As the clock 45 minutes too slow therefore it will indicate 11:45 a.m. which means hour hand will point between l & f (11 & 12) and minute hand will point at k (9).

9. A

Sol. Let’s assume that the capacity of the tank is 60 units (LCM of 30 and 60).

Tap P fills in 1 minute = 60/30 = 2 units

Tap Q fills in 1 minute = 60/60 = 1 unit

Tap (P+Q) fill in 1 minute = 2 + 1 = 3 units

So, 60 units filled by (P+Q) in = 60/3 = 20 minutes

As given the taps start at 8:00 therefore it fills at 8:20.

So, hour hand between ‘d’ and ‘k’ and minute hand at ‘b’.

10. C

Sol. The Ac operates from 10:00 a.m. to 5:00 p.m. i.e. for 7 hrs. The month of September has 30 days.
Therefore the total power consumption is 7 x 30 x 0.5 = 105 units.

11. D

Sol. Train starts from Station A at 3 hour 40 minute = @+
Train reaches Station B at 3 hour 40 minute + 2 hour = 5 hour 40 minute = &+

12. B

Sol. Rohit starts from home at 8 hour 10 minute = +$
He reaches his school at 8 hour 10 minute + 30 minute = 8 hour 40 minute = 8:40 am = ++

13. E

Sol. Scheduled time of departure of train = @# = 3:45 am
Time for travel including the early arrival = 3 hour 20 minutes + 25 minutes = 3 hour 45 minutes
3:45 pm – 3 hour 45 minutes = 12 hour = %%

14. B

Sol. Train Schedule time = $ @ = 2:15 am.
Time at which the passenger reaches the station = 2 hour 15 minute + 25 minute
= 2 hour 40 minutes = $+

15. B

Sol. Bus schedule time = #$ = 9 hour 10 minute
Anil reaches the bus stand = 9 hour 10 minute – 25 minute = 8 hour 45 minute = +#