

GOUR INSTITUTE

PSC, Bank (Clerk/PO), SSC, Railways, S.I., Classes

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F – 12, City Bazar, Thatipur, Gwalior (M.P.) www.gourinstitute.in

CLOCK PROBLEM BASED ON SYMBOLIC SEQUENCE

INTRODUCTION

The face or dial of a watch is a circle whose circumference is divided into 60 equal parts, called minute spaces.

A clock has two hands, the smaller one is called the *hour hand* or *short hand* while the larger one is called the *minute hand* or *long hand*.

I. In 60 minutes, the minute hand gains 55 minutes on the hour hand.

II. In every hour, both the hands coincide once.

III. The hands are in the same straight line when they are coincident or opposite to each other.

IV. When the two hands are at right angles, they are 15 minute spaces apart.

V. When the hands are in opposite directions, they are 30 minute spaces apart.

VI. Angle traced by hour hand in 12 hrs = 360° .

VII. Angle traced by minute hand in 60 min. = 360° .

Too Fast and Too Slow : If a watch or a clock indicates 8.15, when the correct time is 8, it is said to be 15 minutes too fast.

On the other hand, if it indicates 7.45, when the correct time is 8, it is said to be 15 minutes too slow.

1. Find at what time between 8 and 9 o'clock will the hands of a clock be in the same straight line but not together.

Sol. At 8 o'clock, the hour hand is at 8 and the minute hand is at 12, *i.e.* the two hands are 20 min. spaces apart.

To be in the same straight line but not together they will be 30 minute spaces apart. So, the minute hand will have to gain $(30 - 20) = 10$ minute spaces over the hour hand.

55 minute spaces are gained in 60 min.

10 minute spaces will be gained in $[\frac{60}{55} * 10]$ min. = $10 \frac{10}{11}$ min.

\therefore The hands will be in the same straight line but not together at $10 \frac{10}{11}$ min. past 8.

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EXERCISE

- If we arrange alphabetic number at the point of numeric number which is located in dial of watch that will be sequential according to 3 replace with H, 4 replace with I & that will be continued than what will replace of 10.
(a) O (b) R (c) P (d) None of these
 - If we arrange alphabetic number at the point of numeric number which is located in dial of watch that will be sequential according to 6 replace with D, 7 replace with E & that will be continued than what will replace of 12 & 3.
(a) J&B (b) J&K (c) J&M (d) None of these
 - If we arrange alphabetic number at the point of numeric number which is located in dial of watch that will be sequential according to 4 replace with F, 5 replace with H & that will be continued than what will replace of 2.
(a) D (b) Z (c) X (d) None of these
- Note – Read the following checklist which is given below (Question 4).**
M 4 T ★ V @ K J Δ 5 ↑ D U • H \$ C 9 O L Z • R 3 P 8
- If we arrange component at the point of numeric number which is located in dial of watch that will be sequential according to 3 replace with component ★, 4 replace with 5 & that will be continued than what will replace with 10.
(a) • (b) \$ (c) 9 (d) None of these
- Note – Read the following checklist which is given below (Question 5).**
P 6 ★ M @ K J ↓ Q C 5 V Δ 3 ↑ G • R 7 U K +
- If we arrange component at the point of numeric number which is located in dial of watch that will be sequential according to 2 replace with component @, 3 replace with ↓ & that will be continued than what will replace with 12.
(a) 6 (b) J (c) ★ (d) None of these
 - If we arrange component at the point of numeric number which is located in dial of watch that will be sequential according to 2 replace with component U, 3 replace with R & that will be continued than what will replace with 5.
(a) ↑ (b) Δ (c) G (d) None of these
 - What will be the measurement of angle between point of Hour & minutes If Time is 12:40 is in Watch.
(a) 160° (b) 140° (c) 150° (d) None of these
 - What will be the measurement of angle between point of Hour & minutes If Time is 10:35 is in Watch.
(a) $117\frac{1}{2}^{\circ}$ (b) $107\frac{1}{2}^{\circ}$ (c) $109\frac{1}{2}^{\circ}$ (d) None of these
 - What will be the measurement of angle between point of Hour & minutes If Time is 10:10 is in Watch.
(a) 180° (b) 110° (c) 190° (d) None of these
 - If we arrange alphabetic number in Alternative sequence at the point of numeric number which is located in dial of watch that will be sequential according to 10 replace with D, 9 replace with F & that will be continued than what will replace of 4.
(a) N (b) R (c) P (d) None of these

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ANSWER SHEET

CLOCK PROBLEMS BASED ON SYMBOLIC SEQUENCE EXERCISE

1	2	3	4	5	6	7	8	9	10
A	C	B	B	D	D	B	B	B	C