

From,

Convenor  
STUTI (Career Guidance and Placement Cell)  
Sapthagiri College of Engineering  
Bangalore - 560057.

Through

IQAC COORDINATOR  
Sapthagiri College of Engineering  
Bangalore - 560057.

To,

THE PRINCIPAL  
Sapthagiri College of Engineering  
Bangalore - 560057.

Respected Sir,

Subject: Requisition to conduct training on Vocational Education and Training (VET) for final year students from 6<sup>th</sup> July 2015 to 5<sup>th</sup> Aug 2015.

In the benefit of student welfare STUTI is to conduct training on Vocational Education and Training (VET) for final year students from 6<sup>th</sup> July 2015 to 5<sup>th</sup> Aug 2015. So we request you to kindly approve for the above.

Sl.No.	Particular/Head	Amount in Rupees
1	Honorarium	9,05,175/-
2	Breakfast, Tea, Lunch, High Tea	25,000/-
3	Certificates	10,000/-
4	Miscellaneous	1000/-
	<b>Total Amount Allocated in rupees</b>	<b>9,41,175/-</b>

Thanking you

  
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Convenor

**SUMA VISHWANATH**  
Group Head HRD  
Sapthagiri College of Engineering  
Sapthagiri Institute of Medical  
Sciences & Research Centre

  
Principal  
Sapthagiri College of Engineering  
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30/06/2015

## STUTI CIRCULAR

This is to inform that all STUTI team members to attend the meeting held on 03/07/2015 at 1:30PM in Principal Cabin.

### Agenda of the meeting:

1. To Discuss about resource person for training, and to finalize Conduction dates.
2. To Discuss and finalize about Course content.

Sl. No.	Name	Designation		Signature
1	Dr. Ravi. K. N	Professor	Member	<i>Ravi</i>
2	Prof .Prerana Chaithra	Associate Professor	Member	<i>Prerana</i>
3	Prof. Shobha Hugar	Asst. Professor	Member	<i>Shobha</i>
4	Prof. Shobha G	Asst. Professor	Member	<i>Shobha</i>
5	Prof .Madhushree	Asst. Professor	Member	<i>Madhu</i>
6	Prof .Madhu Kumar Y C	Asst. Professor	Member	<i>Madhu</i>
7	C Rakshith	Student	Member	<i>C Rakshith</i>
8	Chaitra C Mouli	Student	Member	<i>Chaitra C.mouli</i>

*Suma*

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*J. Kam*  
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03/07/2015

## STUTI MINUTES OF MEETING

The meeting was held by GROUP HEAD OF HRD on 03/07/2015 at 1:30PM in Principal Cabin.

### Agenda of the meeting:

To conduct training on Vocational Education and Training (VET) for final year students from 6<sup>th</sup> July 2015 to 5<sup>th</sup> Aug 2015.

1. Discussed about resource person, conduction date (6/7/15 to 5/8/15) and decided

Resource person from ladder consultancy service pvt ltd.

2. Discussed about Course content and finalized. Course Schedule and Contents are as shown in the table

3. Informed STUTI team to coordinate with ladder consultancy service pvt ltd to conduct training smoothly.

DATES	SESSION 1	SESSION 2
6/7/15	Introduction to the Quantitative Aptitude <ul style="list-style-type: none"> <li>• Number systems</li> </ul>	Quantitative Aptitude <ul style="list-style-type: none"> <li>• Calenders</li> </ul>
7/7/15	Quantitative Aptitude <ul style="list-style-type: none"> <li>• Profit &amp; loss</li> </ul>	Quantitative Aptitude <ul style="list-style-type: none"> <li>• Ages</li> </ul>
8/7/15	Quantitative Aptitude <ul style="list-style-type: none"> <li>• Permutations</li> </ul>	Quantitative Aptitude. <ul style="list-style-type: none"> <li>• combinations</li> </ul>
9/7/15	Quantitative Aptitude <ul style="list-style-type: none"> <li>• Average</li> </ul>	Quantitative Aptitude <ul style="list-style-type: none"> <li>• Blood Relations</li> </ul>
10/7/15	Quantitative Aptitude <ul style="list-style-type: none"> <li>• Decimal fractions</li> </ul>	Quantitative Aptitude <ul style="list-style-type: none"> <li>• Surds</li> </ul>
11/7/15	Logical reasoning <ul style="list-style-type: none"> <li>• Statement and Conclusion</li> </ul>	Logical reasoning <ul style="list-style-type: none"> <li>• Statement and Assumption</li> </ul>
13/7/15	Logical reasoning <ul style="list-style-type: none"> <li>• Missing Numbers</li> </ul>	Logical reasoning <ul style="list-style-type: none"> <li>• Counting of Figures</li> </ul>



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14/7/15	Logical reasoning • Sitting Arrangement	Logical reasoning • Ranking Arrangement
15/7/15	Logical reasoning • Direction & Distance	Logical reasoning • Dice
16/7/15	Introduction to Communication Soft Skill • Verbal Communication	Introduction to Communication Soft Skill • Verbal Communication
17/7/15	• Visual Communication	• Active Listening
18/7/15	• Visual Communication	• Active Listening
20/7/15	• Written Communication	• Clarity
21/7/15	• Confidence	• Compound interest
22/7/15	• Interviewing	• Clock
23/7/15	• Negotiation	• Personal Branding
24/7/15	• Persuasion	• Presentation Skills
25/7/15	• Public Speaking	• Story telling
27/7/15	• Diplomacy	• Empathy
28/7/15	• Friendliness	• Humor
29/7/15	• Networking	• Patience
30/7/15	• Networking	• Patience
31/7/15	• Positive Reinforcement	• Sensitivity & Tolerance
1/8/15	• Group discussion	• Group discussion
3/8/15	• Group discussion	• Group discussion
4/8/15	• Mock Interview	• Mock Interview
5/8/15	• Mock Interview	• Mock Interview

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## NOTICE

It is hereby informed to all final year students, that the STUTI team of Sapthagiri College of engineering is organizing Vocational Education and Training (VET) for final years from 6/7/2015 to 5/8/2015. So all the students are requested to register their names to department coordinator of STUTI team.



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## NOTICE

This to inform all final year students that Schedule of Vocational Education and Training (VET) is as follows.

DATES	SESSION 1	SESSION 2
6/7/15	Introduction to the Quantitative Aptitude • Number systems	Quantitative Aptitude • Calenders
7/7/15	Quantitative Aptitude • Profit & loss	Quantitative Aptitude • Ages
8/7/15	Quantitative Aptitude • Permutations	Quantitative Aptitude • combinations
9/7/15	Quantitative Aptitude • Average	Quantitative Aptitude • Blood Relations
10/7/15	Quantitative Aptitude • Decimal fractions	Quantitative Aptitude • Surds
11/7/15	Logical reasoning • Statement and Conclusion	Logical reasoning • Statement and Assumption
13/7/15	Logical reasoning • Missing Numbers	Logical reasoning • Counting of Figures
14/7/15	Logical reasoning • Sitting Arrangement	Logical reasoning • Ranking Arrangement
15/7/15	Logical reasoning • Direction & Distance	Logical reasoning • Dice
16/7/15	Introduction to Communication Soft Skill • Verbal Communication	Introduction to Communication Soft Skill • Verbal Communication
17/7/15	• Visual Communication	• Active Listening
18/7/15	• Visual Communication	• Active Listening
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22/7/15	• Interviewing	• Clock
23/7/15	• Negotiation	• Personal Branding
24/7/15	• Persuasion	• Presentation Skills
25/7/15	• Public Speaking	• Story telling
27/7/15	• Diplomacy	• Empathy

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28/7/15	<ul style="list-style-type: none"> <li>• Friendliness</li> </ul>	<ul style="list-style-type: none"> <li>• Humor</li> </ul>
29/7/15	<ul style="list-style-type: none"> <li>• Networking</li> </ul>	<ul style="list-style-type: none"> <li>• Patience</li> </ul>
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1/8/15	<ul style="list-style-type: none"> <li>• Group discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Group discussion</li> </ul>
3/8/15	<ul style="list-style-type: none"> <li>• Group discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Group discussion</li> </ul>
4/8/15	<ul style="list-style-type: none"> <li>• Mock Interview</li> </ul>	<ul style="list-style-type: none"> <li>• Mock Interview</li> </ul>
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## NOTICE

STUTI team hereby informing to all final year students, to attend Scheduled test on Quantitative/ logical reasoning/verbal aptitude and soft skill training on 6/8/2015. So all the students are requested to attend the training test without fail.



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## QUESTION PAPER

1. 504 can be expressed as a product of primes as

A.  $2 \times 2 \times 3 \times 3 \times 7 \times 7$

B.  $2 \times 3 \times 3 \times 3 \times 7 \times 7$

C.  $2 \times 3 \times 3 \times 3 \times 3 \times 7$

D.  $2 \times 2 \times 2 \times 3 \times 3 \times 7$

2. Which of the following integers has the most number of divisors?

A. 101

B. 99

C. 182

D. 176

3. The least number which should be added to 28523 so that the sum is exactly divisible by 3, 5, 7 and 8 is

A. 41

B. 42

C. 32

D. 37

4. What is the least number which when doubled will be exactly divisible by 12, 14, 18 and 22 ?

A. 1286

B. 1436

C. 1216

D. 1386

5. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through

A.  $155^\circ$

B.  $145^\circ$

C.  $152^\circ$

D.  $140^\circ$

6. At what time between 7 and 8 o'clock will the hands of a clock be in the same straight line but not

  
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together?

A. 5 minutes past 7

B. 53115311 minutes past 7

C. 51115111 minutes past 7

D. 55115511 minutes past 7

7. At what time between 5.30 and 6 will the hands of a clock be at right angles?

A. 44 minutes past 5

B. 4471144711 minutes past 5

C. 4371143711 minutes past 5

D. 43 minutes past 5

8. At what angle the hands of a clock are inclined at 15 minutes past 5?

A.  $6712^{\circ}6712^{\circ}$

B.  $6212^{\circ}6212^{\circ}$

C.  $70^{\circ}$

D.  $6334^{\circ}6334^{\circ}$

9. At 3:40, the hour hand and the minute hand of a clock form an angle of

A.  $135^{\circ}$

B.  $130^{\circ}$

C.  $120^{\circ}$

D.  $125^{\circ}$

10. The angle between the minute hand and the hour hand of a clock when the time is 8.30, is

A.  $75^{\circ}$

B.  $85^{\circ}$

C.  $80^{\circ}$

D.  $70^{\circ}$

11. How many times in a day, are the hands of a clock in straight line but opposite in direction?

A. 48

B. 22

C. 24

D. 12

  
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12. At what time between 3 o'clock and 4 o'clock, both the needles of a clock will coincide each other?

A. 1621116211 minutes past 3

B. 1641116411 minutes past 3

13. How many times will the hands of a clock coincide in a day?

A. 24

B. 22

14. The H.C.F. of two numbers is 5 and their L.C.M. is 150. If one of the numbers is 25, then the other is:

A. 30

B. 28

C. 24

D. 20

15. 504 can be expressed as a product of primes as

A.  $2 \times 2 \times 3 \times 3 \times 7 \times 7$

B.  $2 \times 3 \times 3 \times 3 \times 7 \times 7$

C.  $2 \times 3 \times 3 \times 3 \times 3 \times 7$

D.  $2 \times 2 \times 2 \times 3 \times 3 \times 7$

16. Ten years ago, P was half of Q's age. If the ratio of their present ages is 3:4:3, what will be the total of their present ages?

A. 45


B. 40

C. 35

D. 30

17. Father is aged three times more than his son Sunil. After 88 years, he would be two and a half times of Sunil's age. After further 88 years, how many times would he be of Sunil's age?

  
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- A. 44 times  
B. 55 times  
C. 22 times  
D. 33 times

18 .A man's age is 125%125% of what it was 1010 years ago,  
but 8313%8313% of what it will be after 1010 years. What is his present age?

- A. 70.  
B. 60  
C. 50  
D. 40

19. A man is 2424 years older than his son. In two years, his age will be twice  
the age of his son. What is the present age of his son?

- A. 23 years  
B. 22years  
C. 21 years  
D. 20 years

20. Two numbers are in the ratio 2 : 3. If their L.C.M. is 48. what is sum of  
the numbers?

- A. 28  
B. 40  
C. 64  
D. 42

21. What is the greatest number of four digits which is divisible by 15, 25, 40  
and 75 ?

- A. 9800  
B. 9600  
C. 9400  
D. 9200

22. Three numbers are in the ratio of 2 : 3 : 4 and their L.C.M. is 240. Their

  
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D. "I am a boy"

27.What is the purpose of "rb" in fopen() function used below in the code?

```
FILE *fp;  
fp = fopen("source.txt", "rb");
```

- A. open "source.txt" in binary mode for reading
- B. open "source.txt" in binary mode for reading and writing
- C. Create a new file "source.txt" for reading and writing
- D. None of above

28.What does fp point to in the program ?

```
#include<stdio.h>  
  
int main()  
{  
    FILE *fp;  
    fp=fopen("trial", "r");  
    return 0;  
}
```

- A. The first character in the file
- B. A structure which contains a char pointer which points to the first character of a file.
- C. The name of the file.
- D. The last character in the file.

29.Which of the following operations can be performed on the file "NOTES.TXT" using the below code?

```
FILE *fp;  
fp = fopen("NOTES.TXT", "r+");
```

- A. Reading
- B. Writing
- C. Appending

D. Read and Write

30. To print out a and b given below, which of the following printf() statement will you use?


```
#include<stdio.h>
```

```
float a=3.14;
```

```
double b=3.14;
```

- A. printf("%f %lf", a, b);
- B. printf("%Lf %f", a, b);
- C. printf("%Lf %Lf", a, b);
- D. printf("%f %Lf", a, b);

  
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## SCHEME

1. Answer: Option D

Explanation:

It is clear that  $504 = 2 \times 2 \times 2 \times 3 \times 3 \times 7$

2. Answer: Option D

Explanation:

$$99 = 1 \times 3 \times 3 \times 11$$

=> Divisors of 99 are 1, 3, 11, 9, 33 and 99

$$101 = 1 \times 101$$

=> Divisors of 101 are 1 and 101

$$182 = 1 \times 2 \times 7 \times 13$$

=> Divisors of 182 are 1, 2, 7, 13, 14, 26, 91 and 182

$$176 = 1 \times 2 \times 2 \times 2 \times 2 \times 11$$

=> Divisors of 176 are 1, 2, 11, 4, 22, 8, 44, 16, 88, 176

Hence 176 has most number of divisors.

3. Answer: Option D

Explanation:

LCM of 3, 5, 7 and 8 = 840

$$28523 \div 840 = 33 \text{ remainder} = 803$$

Hence the least number which should be added =  $840 - 803 = 37$

4. Answer: Option D

Explanation:

  
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LCM of 12, 14, 18 and 22 = 2772

Hence the least number which will be exactly divisible by 12, 14, 18 and 22 = 2772

$$2772 \div 2 = 1386$$

1386 is the number which when doubled, we get 2772

Hence, 1386 is the least number which when doubled will be exactly divisible by 12, 14, 18 and 22.

5. Answer: Option A

Explanation:

We know that angle traced by hour hand in 12 hrs =  $360^\circ$

Time duration from noon to 10 minutes past 5

= 5 hours 10 minutes

$$= 5 \times 60 + 10 = 310 \text{ minutes} = 310 \times \frac{360}{12} = 310 \times 30 = 9300 \text{ minutes} = 310 \times 30 = 9300 \text{ minutes}$$

Hence the angle traced by hour hand from noon to 10 minutes past 5

$$= 310 \times 30 = 9300 \text{ minutes} = 310 \times 30 = 9300 \text{ minutes} = 310 \times 30 = 9300 \text{ minutes}$$

6. Answer: Option D

Explanation:

## Solution 1

The two hands of a clock will be in the same straight line but not together between HH and (H+1)(H+1) o' clock at

$5H - 30$  minutes past H, when  $H > 6$   $(5H + 30)$  minutes past H,

when  $H < 6$   $(5H - 30)$  minutes past H, when  $H > 6$   $(5H + 30)$  minutes past H, when  $H < 6$

Here  $H = 7$ .

Hands of the clock will point in opposite directions at

  
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$(5 \times 7 - 30)1211(5 \times 7 - 30)1211$  minutes past 7

$= 5 \times 1211 = 5 \times 1211$  minutes past 7

$= 6011 = 6011$  minutes past 7

$= 5511 = 5511$  minutes past 7

## Solution 2

It's better to use formula as it can save lots of time in exams. However we should understand the basics for sure. Please find the method given below to solve the same problem in the traditional way.

If the hands of the clock are in the same straight line, but not together, they will be 30 minute spaces apart.

At 7'o clock, the hands of the clock are 25 minute spaces apart. Hence the minute hand should gain 5 minute spaces over the hour hand so that the hands will be 30 minute spaces apart.

In 60 minutes, minute hand gains 55 minute spaces over the hour hand.

Hence, to gain 5 minute spaces for the minute hand, time needed  
 $= 6055 \times 5 = 6011 = 6055 \times 5 = 6011$  minutes  $= 5511 = 5511$  minutes

That means when the time is 55115511 minutes past 7, the hands of a clock will be in the same straight line but not together.

7. Answer: Option C

Explanation

## Solution 1

The two hands of the clock will be at right angles between HH and (H+1)(H+1) o' clock at  
 $(5H \pm 15)1211(5H \pm 15)1211$  minutes past HH 'o clock

Let's see the times at which right angles are formed between 5 and 6

Let's take H=5. Hence the two hands will be at right angles between 5 and 6 at

$(5 \times 5 \pm 15)1211(5 \times 5 \pm 15)1211$  minutes past 5 'o clock

  
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$= (25 \pm 15) 1211 = (25 \pm 15) 1211$  minutes past 5 'o clock

$= 10 \times 1211 = 10 \times 1211$  minutes past 5 'o clock and  $40 \times 1211 = 40 \times 1211$  minutes past 5 'o clock

$= 12011 = 12011$  minutes past 5 'o clock and  $48011 = 48011$  minutes past 5 'o clock

$= 101011 = 101011$  minutes past 5 'o clock and  $43711 = 43711$  minutes past 5 'o clock

101011101011 minutes past 5 comes before 5.30. 4371143711 minutes past 5 comes between 5.30 and 6. The question is to find out the time between 5.30 and 6 when the hands of a clock will be at right angles. Hence the required time is 4371143711 minutes past 5

## Solution 2

At 5, the hands are 25 minutes spaces apart.

To get a right angle when the time is between 5.30 and 6, the minute hand has to gain  $(25 + 15) = 40$  minute spaces over the hour hand.

In 60 minutes, minute hand gains 55 minute spaces over the hour hand.

Hence, to gain 40 minute spaces for the minute hand, time needed  
 $= 60 \times \frac{40}{55} = 1211 \times \frac{40}{55} = 48011 = 43711$  minutes.  $= 60 \times \frac{40}{55} = 1211 \times \frac{40}{55} = 48011 = 43711$  minutes.

That means when the time is 4371143711 minutes past 5, the hands of a clock will be at right angles

8. Answer: Option A

Explanation:

## Solution 1

Angle between hands of a clock

When the minute hand is behind the hour hand, the angle between the two hands at MM minutes past HH 'o clock

$$= 30(H - M5) + M2 = 30(H - M5) + M2 \text{ degree}$$

When the minute hand is ahead of the hour hand, the angle between the two hands at MM minutes



past HH 'o clock

$$=30(M5-H)-M2 \text{ degree} = 30(M5-H)-M2 \text{ degree}$$

Here  $H = 5$ ,  $M = 15$  and the minute hand is behind the hour hand.

Hence the angle

$$=30(H-M5)+M2 = 30(5-155)+152 = 30(5-3)+7.5 = 30 \times 2 + 7.5 = 67.5^\circ = 30(H-M5)+M2 = 30(5-155) + 152 = 30(5-3)+7.5 = 30 \times 2 + 7.5 = 67.5^\circ$$

## Solution 2

15 minutes past 5

= 5 hour 15 minutes

$$=51560 = 51560 \text{ hour} = 514 = 514 \text{ hour} = 214 = 214 \text{ hour}$$

Angle traced by hour hand in 12 hours =  $360^\circ$

Hence angle traced by hour hand in 214214 hour

$$=36012 \times 214 = 30 \times 214 = 30 \times 5.25 = 36012 \times 214 = 30 \times 214 = 30 \times 5.25 = 157.5^\circ$$

Angle traced by minute hand in 60 minutes =  $360^\circ$

Angle traced by minute hand in 15 minutes =  $36060 \times 15 = 36060 \times 15 = 90^\circ$

$$\text{Required angle} = 157.5 - 90 = 67.5^\circ$$

9. Answer: Option B

Explanation:

## Solution 1

Angle between hands of a clock


When the minute hand is behind the hour hand, the angle between the two hands at MM minutes

past HH 'o clock

$$=30(H-M5)+M2 = 30(H-M5)+M2 \text{ degree}$$

When the minute hand is ahead of the hour hand, the angle between the two hands at MM minutes

  
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past HH 'o clock

$$=30(M5-H)-M2 \text{ degree} = 30(M5-H)-M2 \text{ degree}$$

Here  $H = 3$ ,  $M = 40$  and minute hand is ahead of the hour hand.

Hence the angle

$$=30(M5-H)-M2 = 30(405-3)-402 = 30(8-3)-20 = 30 \times 5 - 20 = 130^\circ = 30(M5-H)-M2 = 30(405-3)-402 = 30(8-3)-20 = 30 \times 5 - 20 = 130^\circ$$

## Solution 2

$$3:40 = 3 \text{ hour } 40 \text{ minutes} = 34060 = 34060 \text{ hour} = 323 = 323 \text{ hour} = 113 = 113 \text{ hour}$$

Angle traced by hour hand in 12 hours =  $360^\circ$

Hence angle traced by hour hand in 113113 hour

$$= 36012 \times 113 = 30 \times 113 = 10 \times 11 = 110^\circ = 36012 \times 113 = 30 \times 113 = 10 \times 11 = 110^\circ$$

Angle traced by minute hand in 60 minutes =  $360^\circ$

Angle traced by minute hand in 40 minutes

$$= 36060 \times 40 = 240^\circ = 36060 \times 40 = 240^\circ$$

Required angle =  $240 - 110 = 130^\circ$

10. Answer: Option A

Explanation:


## Solution 1

Angle between hands of a clock

When the minute hand is behind the hour hand, the angle between the two hands at MM minutes past HH 'o clock

$$= 30(H-M5)+M2 = 30(H-M5)+M2 \text{ degree}$$

When the minute hand is ahead of the hour hand, the angle between the two hands at MM minutes

  
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past HH 'o clock

$$=30(M5-H)-M2 \text{ degree} = 30(M5-H)-M2 \text{ degree}$$

Here  $H = 8$ ,  $M = 30$  and minute hand is behind the hour hand.

Hence the angle

$$=30(H-M5)+M2 = 30(8-305)+302 = 30(8-6)+15 = 30 \times 2 + 15 = 75^\circ = 30(H-M5)+M2 = 30(8-305)+302 = 30(8-6)+15 = 30 \times 2 + 15 = 75^\circ$$

## Solution 2

$$8.30 = 8 \text{ hour } 30 \text{ minutes} = 812 = 812 \text{ hour} = 172172 \text{ hour.}$$

$$\text{Angle traced by hour hand in 12 hours} = 360^\circ$$

Hence angle traced by hour hand in 177177 hour

$$= 36012 \times 172 = 30 \times 172 = 15 \times 17 = 255^\circ = 36012 \times 172 = 30 \times 172 = 15 \times 17 = 255^\circ$$

$$\text{Angle traced by minute hand in 60 minutes} = 360^\circ$$

Angle traced by minute hand in 30 minutes

$$= 36060 \times 30 = 180^\circ = 36060 \times 30 = 180^\circ$$

$$\text{Required angle} = 255 - 180 = 75^\circ$$

11. Answer: Option B

Explanation:

The hands of a clock point in opposite directions (in the same straight line, making an angle  $180^\circ$  between them) 11 times in every 12 hours because between 5 and 7 they point in opposite directions at 6 'o clock only.

Hence the hands point in the opposite directions 22 times in a day.

This is already given as a formula and it's better to learn the answer by heart as 22 which can save time in competitive exams. (However you should know the theory behind).

12. Answer: Option B

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Explanation:

## Solution 1

The two hands of a clock will be together between HH and (H+1)(H+1) o' clock at (60H11)(60H11) minutes past HH o' clock.

Here H = 3. Hands will be together at

60H11 60H11 minutes past 3

=60×311=60×311 minutes past 3

=18011=18011 minutes past 3

=16411=16411 minutes past 3

## Solution 2

At 3 o' clock, the hands are 15 minute spaces apart.

Hence minute hand needs to gain 15 more minute spaces over the hour hand so that the hands will coincide each other.

In 60 minutes, minute hand gains 55 minute spaces over the hour hand.

Hence, time taken for gaining 15 minute spaces by minute hand

=6055×15=6055×15 minute =1211×15=1211×15 minute

=18011=18011 minute =16411=16411 minute.

Hence hands will coincide at 16411 16411 minute past 3

13. Answer: Option B

Explanation:



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The hands of a clock coincide 11 times in every 12 hours (Between 11 and 1, they coincide only once, at 12 o'clock).

12:00 am  
1:05 am  
2:11 am  
3:16 am  
4:22 am  
5:27 am  
6:33 am  
7:38 am  
8:44 am  
9:49 am  
10:55 am  
12:00 pm  
1:05 pm  
2:11 pm  
3:16 pm  
4:22 pm  
5:27 pm  
6:33 pm  
7:38 pm  
8:44 pm  
9:49 pm  
10:55 pm

Hence the hands coincide 22 times in a day.

This is already given as a formula and it's is better to learn the answer by heart as 22 which can save time in competitive exams.(However you should know the theory behind).

## Solution 2 - Hit and Trial Method

Just see which of the given choices satisfy the given condtions.

Take 3363. This is not even divisible by 9. Hence this is not the answer.

Take 1108. This is not even divisible by 9. Hence this is not the answer.

Take 2007. This is divisible by 9.

$2007 \div 5 = 401$ , remainder = 2. Hence this is not the answer

  
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Take 1683. This is divisible by 9.

$$1683 \div 5 = 336, \text{ remainder} = 3$$

$$1683 \div 6 = 280, \text{ remainder} = 3$$

$$1683 \div 7 = 240, \text{ remainder} = 3$$

$$1683 \div 8 = 210, \text{ remainder} = 3$$

Hence 1683 is the answer

14. Answer: Option A

Explanation:

Product of two numbers = Product of their HCF and LCM.

Let one number =  $x$

$$\Rightarrow 25 \times x = 5 \times 150 \quad 25 \times x = 5 \times 150$$

$$\Rightarrow x = 5 \times 150 \div 25 = 30 \quad x = 5 \times 150 \div 25 = 30$$

15. Answer: Option D

Explanation:

It is clear that  $504 = 2 \times 2 \times 2 \times 3 \times 3 \times 7$

16. Answer: Option C

Explanation:

Let present age of P and Q be  $3x$  and  $4x$  respectively.

Ten years ago, P was half of Q's age

$$\Rightarrow (3x - 10) = \frac{1}{2}(4x - 10) \Rightarrow 6x - 20 = 4x - 10 \Rightarrow 2x = 10 \Rightarrow x = 5 \Rightarrow (3x - 10) = \frac{1}{2}(4x - 10) \Rightarrow 6x - 20 = 4x - 10 \Rightarrow 2x = 10 \Rightarrow x = 5$$

Total of their present ages

$$= 3x + 4x = 7x = 7 \times 5 = 35 = 3x + 4x = 7x = 7 \times 5 = 35$$



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20. Answer: Option B

Explanation:

Let the numbers be  $2x2x$  and  $3x3x$

LCM of  $2x2x$  and  $3x3x = 6x = 6x$  ( $\because$  LCM of 2 and 3 is 6. Hence LCM of  $2x2x$  and  $3x3x$  is  $6x6x$ )

Given that LCM of  $2x2x$  and  $3x3x$  is 48

$$\Rightarrow 6x = 48 \Rightarrow x = 8$$

$$\Rightarrow x = 48 \div 6 = 8$$

Sum of the numbers

$$= 2x + 3x = 5x = 2x + 3x = 5x$$

$$= 5 \times 8 = 40$$

21. Answer: Option B

Explanation:

Greatest number of four digits = 9999

LCM of 15, 25, 40 and 75 = 600

$$9999 \div 600 = 16, \text{ remainder} = 399$$

Hence, greatest number of four digits which is divisible by 15, 25, 40 and 75  
 $= 9999 - 399 = 9600$

22. Answer: Option C

Explanation:

Let the numbers be  $2x2x$ ,  $3x3x$  and  $4x4x$

LCM of  $2x2x$ ,  $3x3x$  and  $4x4x = 12x12x$

$$12x = 240 \Rightarrow x = 240 \div 12 = 20$$



H.C.F of  $2 \times 2x$ ,  $3 \times 3x$  and  $4 \times 4x = x = 20 = x = 20$

**23. Answer: Option D**

Explanation:

$$\begin{array}{r|l}
 2 & 12, 36, 20 \\
 \hline
 2 & 6, 18, 10 \\
 \hline
 3 & 3, 9, 5 \\
 \hline
 & 1, 3, 5
 \end{array}$$

$$\text{LCM} = 2 \times 2 \times 3 \times 1 \times 3 \times 5 = 180$$

**24. Answer: Option B**

Explanation:

**Solution 1**

$$\text{LCM of } 5, 6, 7 \text{ and } 8 = 840$$

Hence the number can be written in the form  $(840k + 3)$  which is divisible by 9.


If  $k = 1$ , number =  $(840 \times 1) + 3 = 843$  which is not divisible by 9.

If  $k = 2$ , number =  $(840 \times 2) + 3 = 1683$  which is divisible by 9.

Hence 1683 is the least number which when divided by 5, 6, 7 and 8 leaves a remainder 3, but when divided by 9 leaves no remainder.

**Solution 2 - Hit and Trial Method**

Just see which of the given choices satisfy the given conditions.

  
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Take 3363. This is not even divisible by 9. Hence this is not the answer.

Take 1108. This is not even divisible by 9. Hence this is not the answer.

Take 2007. This is divisible by 9.

$2007 \div 9 = 223$ , remainder = 0. Hence this is not the answer

Take 1683. This is divisible by 9.

$1683 \div 3 = 561$ , remainder = 0

$1683 \div 6 = 280$ , remainder = 3

$1683 \div 7 = 240$ , remainder = 3

$1683 \div 8 = 210$ , remainder = 3

Hence 1683 is the answer

25. Answer: Option A

Explanation:

Product of two numbers = Product of their HCF and LCM.

Let one number =  $x$

$\Rightarrow 25 \times x = 5 \times 150$

$\Rightarrow x = 5 \times 150 / 25 = 30$

26..Answer: Option C

Explanation:

**Declaration:** `char *fgets(char *s, int n, FILE *stream);`

`fgets` reads characters from `stream` into the string `s`. It stops when it reads either `n - 1` characters or a newline character, whichever comes first.

Therefore, the string `str` contain "I am a boy\n\0"

27.Answer: Option A

Explanation:

The file `source.txt` will be opened in the binary mode.

28. Answer: Option B

Explanation:



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The `fp` is a structure which contains a `char` pointer which points to the first character of a file.

29. Answer: Option D

Explanation:

`r+` Open an existing file for update (reading and writing).


30. Answer: Option A

Explanation:

To print a float value, `%f` is used as format specifier.

To print a double value, `%lf` is used as format specifier.

Therefore, the answer is `printf("%f %lf", a, b);`

  
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# Placement



STUTI  
CAREER GUIDANCE AND PLACEMENT CELL

## CERTIFICATE OF PERFORMANCE

*THIS IS TO CERTIFY THAT*

*Mr/Ms \_\_\_\_\_ has participated in  
“Career counselling / Personnel counselling / soft skill training” from 27/7/2015 to  
1/8/2015 organized by STUTI Team.*

*Reshma*

CONVENOR

*[Signature]*  
PRINCIPAL

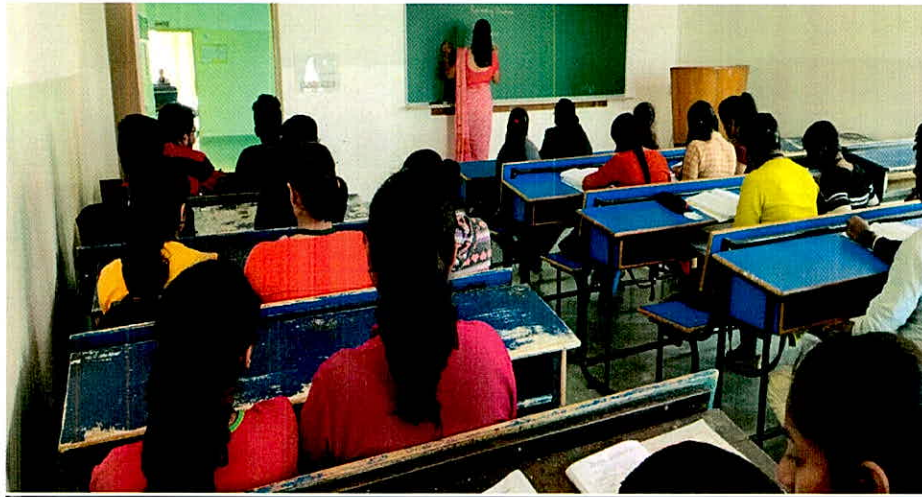
## 1. REPORT ON VOCATIONAL EDUCATION & TRAINING (VET)

The Placement department of Sapthagiri College of engineering organized Vocational Education & Training (VET) from 06/07/15 to 05/08/15 and all the final year students attended the training program. The program was successfully organized and carried out by placement department.

The training program covered the following domains

1. Communication skills
2. Verbal Aptitude
3. Soft skills
4. Group Discussion
5. HR Skills
6. Mock Interview

### SCREENSHOT OF THE PROGRAM

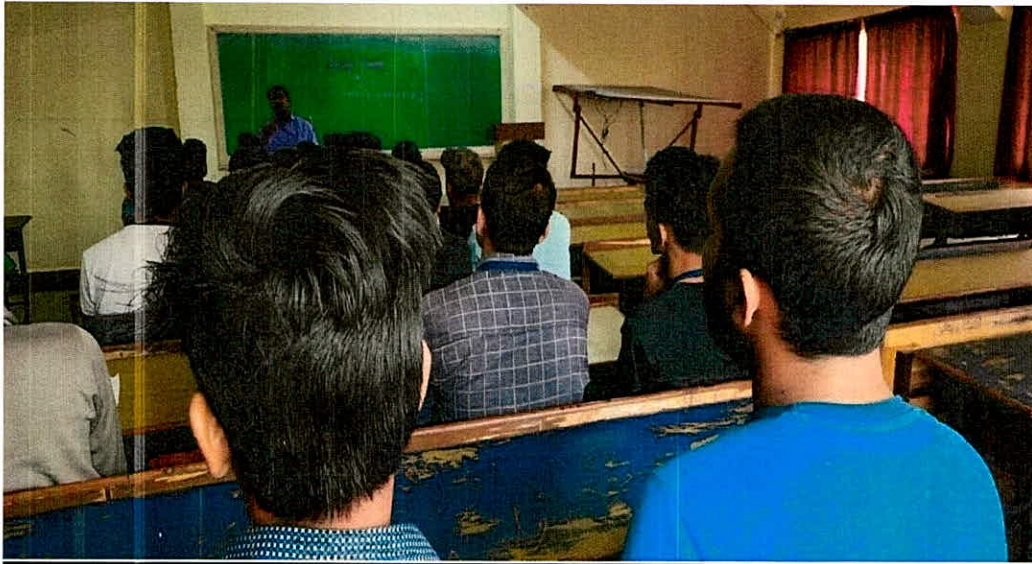


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**SUMA VISHWANATH**  
Group Head HRD  
Sapthagiri College of Engineering  
Sapthagiri Institute of Medical  
Sciences & Research Centre

*f. Karth*

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PLACEMENT TRAINING



GROUP DISCUSSION

*Suma*

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*P. Karthi*

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## MOCK INTERVIEW



Convener

**SUMA VISHWANATH**  
Group Head HRD  
Sapthagiri College of Engineering  
Sapthagiri Institute of Medical  
Sciences & Research Centre



Principal

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Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
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From,

Convenor  
STUTI (Career Guidance and Placement Cell)  
Sapthagiri College of Engineering  
Bangalore - 560057.

Through

IQAC COORDINATOR  
Sapthagiri College of Engineering  
Bangalore - 560057.

To,

THE PRINCIPAL  
Sapthagiri College of Engineering  
Bangalore - 560057.

Respected Sir,

Subject: Requisition to conduct training on Career counselling / Personnel counselling / verbal aptitude and soft skill training for 3<sup>rd</sup> & 5<sup>th</sup> sem students from 27<sup>th</sup> July 2015 to 1<sup>st</sup> Aug 2015.

In the benefit of student welfare STUTI is Conducting training on Quantitative/ logical reasoning/verbal aptitude and soft skill training for pre final years from 27<sup>th</sup> July 2015 to 1<sup>st</sup> Aug 2015. So we request you to kindly approve for the above.

Sl.No.	Particular/Head	Amount in Rupees
1	Honorarium	1,00,575/-
2	Breakfast, Tea, Lunch, High Tea	5,000/-
3	Certificates	5,000/-
4	Miscellaneous	1000/-
	<b>Total Amount Allocated in rupees</b>	<b>1,11,575/-</b>

Thanking you



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Convenor

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24/07/2015

## STUTI CIRCULAR

This is to inform that all STUTI team members to attend the meeting held on 25/07/2015 at 1:30PM in Principal Cabin.

### Agenda of the meeting:

1. To Discuss about resource person for training, and to finalize Conduction dates.
2. To Discuss and finalize about Course content.

Sl. No.	Name	Designation		Signature
1	Dr. Ravi. K. N	Professor	Member	<i>Ravi</i>
2	Prof .Prerana Chaithra	Associate Professor	Member	<i>Prerana</i>
3	Prof. Shobha Hugar	Asst. Professor	Member	<i>Shobha</i>
4	Prof. Shobha G	Asst. Professor	Member	<i>Shobha</i>
5	Prof .Madhushree	Asst. Professor	Member	<i>MD</i>
6	Prof .Madhu Kumar Y C	Asst. Professor	Member	<i>MK</i>
7	C Rakshith	Student	Member	<i>C.Rakshith</i>
8	Chaitra C Mouli	Student	Member	<i>Chaitra C Mouli</i>

*Suma*

Convener

**SUMA VISHWANATH**

Group Head HRD

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*Kan*

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25/07/2015

## STUTI MINUTES OF MEETING

The meeting was held by GROUP HEAD OF HRD on 25/07/2015 at 1:30PM in Principal Cabin.

### Agenda of the meeting:

To conduct training on Quantitative/ logical reasoning/verbal aptitude and soft skill training for 3<sup>rd</sup> & 5<sup>th</sup> sem students from 27<sup>th</sup> July 2015 to 1<sup>st</sup> Aug 2015.

1. Discussed about resource person, conduction date (27/7/15 to 1/8/15) and decided  
Resource person from ladder consultancy service pvt ltd.
2. Discussed about Course content and finalized. Course Schedule and Contents are as shown in the table
3. Informed STUTI team to coordinate with ladder consultancy service pvt ltd to conduct training smoothly.

DATES	SESSION 1	SESSION 2
27/7/15	Introduction to Communication Soft Skill • Verbal Communication	Communication Skill • Non Verbal Communication
28/7/15	• Visual Communication • Written Communication	• Active Listening • Clarity
29/7/15	• Confidence • Interviewing	• Compound interest • Clock
30/7/15	• Negotiation	• Personal Branding
31/7/15	• Persuasion	• Presentation Skills
1/8/15	• Group discussion	• Mock Interview



Convener

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## NOTICE

It is hereby informed to all 3<sup>rd</sup> & 5<sup>th</sup> sem students, that the STUTI team of Sapthagiri College of engineering is organizing training on Career counselling / Personnel counselling / verbal aptitude and soft skill training for 3<sup>rd</sup> & 5<sup>th</sup> sem students from 27/7/2015 to 1/8/2015. So all the students are requested to register their names to department coordinator of STUTI team.



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## NOTICE

This to inform all final year students that Schedule of Career counselling / Personnel counselling / soft skill training are as follows.

DATES	SESSION 1	SESSION 2
27/7/15	Introduction to Communication Soft Skill	Communication Skill <ul style="list-style-type: none"> <li>• Non Verbal Communication</li> </ul>
28/7/15	<ul style="list-style-type: none"> <li>• Visual Communication</li> <li>• Written Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Active Listening</li> <li>• Clarity</li> </ul>
29/7/15	<ul style="list-style-type: none"> <li>• Confidence</li> <li>• Interviewing</li> </ul>	<ul style="list-style-type: none"> <li>• Compound interest</li> <li>• Clock</li> </ul>
30/7/15	<ul style="list-style-type: none"> <li>• Negotiation</li> </ul>	<ul style="list-style-type: none"> <li>• Personal Branding</li> </ul>
31/7/15	<ul style="list-style-type: none"> <li>• Persuasion</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation Skills</li> </ul>
1/8/15	<ul style="list-style-type: none"> <li>• Group discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Mock Interview</li> </ul>



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## NOTICE

STUTI team hereby informing to all 3<sup>rd</sup> & 5<sup>th</sup> sem students, to attend Scheduled test on Career counselling / Personnel counselling / soft skill training on 6/8/2015. So all the students are requested to attend the training test without fail.



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## QUESTION PAPER

- Two numbers are in the ratio 2 : 3. If their L.C.M. is 48. what is sum of the numbers?  
A. 28  
B. 40  
C. 64  
D. 42
- What is the greatest number of four digits which is divisible by 15, 25, 40 and 75 ?  
A. 9800  
B. 9600  
C. 9400  
D. 9200
- Three numbers are in the ratio of 2 : 3 : 4 and their L.C.M. is 240. Their H.C.F. is:  
A. 40  
B. 30  
C. 20  
D. 10
- What is the lowest common multiple of 12, 36 and 20?  
A. 160  
B. 220  
C. 120  
D. 180
- What is the least number which when divided by 5, 6, 7 and 8 leaves a remainder 3, but when divided by 9 leaves no remainder?  
A. 1108  
B. 1683  
C. 2007  
D. 3363
- The H.C.F. of two numbers is 5 and their L.C.M. is 150. If one of the numbers is 25, then the other is:  
A. 30  
B. 28  
C. 24  
D. 20
- 504 can be expressed as a product of primes as  
A.  $2 \times 2 \times 3 \times 3 \times 7 \times 7$   
B.  $2 \times 3 \times 3 \times 3 \times 7 \times 7$   
C.  $2 \times 3 \times 3 \times 3 \times 3 \times 7$   
D.  $2 \times 2 \times 2 \times 3 \times 3 \times 7$

*Kan!*  
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C. 22 times

D. 33 times

24. A man's age is 125% of what it was 1010 years ago, but 8313% of what it will be after 1010 years. What is his present age?

A. 70

B. 60

C. 50

D. 40

25. A man is 2424 years older than his son. In two years, his age will be twice the age of his son. What is the present age of his son?

A. 23 years    B. 22years    C. 21 years    D. 20 years

26. Point out the error in the program?

```
#include<stdio.h>
#include<stdlib.h>

int main()
{
    unsigned char;
    FILE *fp;
    fp=fopen("trial", "r");
    if(!fp)
    {
        printf("Unable to open file");
        exit(1);
    }
    fclose(fp);
    return 0;
}
```

A. Error: in unsigned char statement

B. Error: unknown file pointer

C. No error

D. None of above

27. Point out the error in the program?

```
#include<stdio.h>
```

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```
int main()
{
char ch;
int i;
scanf("%c", &i);
scanf("%d", &ch);
printf("%c %d", ch, i);
return 0;
}
```

- A. Error: suspicious char to in conversion in scanf()
- B. Error: we may not get input for second scanf() statement
- C. No error
- D. None of above

28. Point out the error/warning in the program?

```
#include<stdio.h>

int main()
{
unsigned char ch;
FILE *fp;
fp=fopen("trial", "r");
while((ch = getc(fp))!=EOF)
printf("%c", ch);
fclose(fp);
return 0;
}
```

- A. Error: in unsigned char declaration
- B. Error: while statement
- C. No error
- D. It prints all characters in file "trial"

29. The keyword used to transfer control from a function back to the calling function is

- A. switch
- B. goto
- C. go back
- D. return

30. A function cannot be defined inside another function

  
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## SCHEME

1. Answer: Option B

Explanation:

Let the numbers be  $2x2x$  and  $3x3x$

LCM of  $2x2x$  and  $3x3x = 6x = 6x$  ( $\because$  LCM of 2 and 3 is 6. Hence LCM of  $2x2x$  and  $3x3x$  is  $6x6x$ )

Given that LCM of  $2x2x$  and  $3x3x$  is 48

$$\Rightarrow 6x = 48 \Rightarrow x = 8$$

$$\Rightarrow x = 8$$

Sum of the numbers

$$= 2x + 3x = 5x = 2x + 3x = 5x$$

$$= 5 \times 8 = 40$$

2. Answer: Option B

Explanation:

Greatest number of four digits = 9999

LCM of 15, 25, 40 and 75 = 600

$$9999 \div 600 = 16, \text{ remainder} = 399$$

Hence, greatest number of four digits which is divisible by 15, 25, 40 and 75

$$= 9999 - 399 = 9600$$

3. Answer: Option C

Explanation:

Let the numbers be  $2x2x$ ,  $3x3x$  and  $4x4x$

LCM of  $2x2x$ ,  $3x3x$  and  $4x4x = 12x12x$

$$12x = 240 \Rightarrow x = 20$$

$$\text{H.C.F of } 2x2x, 3x3x \text{ and } 4x4x = x = 20$$

4. Answer: Option D

Explanation:

  
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$$\begin{array}{r|l}
 2 & 12, 36, 20 \\
 \hline
 2 & 6, 18, 10 \\
 \hline
 3 & 3, 9, 5 \\
 \hline
 & 1, 3, 5
 \end{array}$$

$$\text{LCM} = 2 \times 2 \times 3 \times 1 \times 3 \times 5 = 180$$

5. Answer: Option B

Explanation:

**Solution 1**

LCM of 5, 6, 7 and 8 = 840

Hence the number can be written in the form  $(840k + 3)$  which is divisible by 9.

If  $k = 1$ , number =  $(840 \times 1) + 3 = 843$  which is not divisible by 9.

If  $k = 2$ , number =  $(840 \times 2) + 3 = 1683$  which is divisible by 9.

Hence 1683 is the least number which when divided by 5, 6, 7 and 8 leaves a remainder 3, but when divided by 9 leaves no remainder.

6. Answer: Option A

Explanation:

Product of two numbers = Product of their HCF and LCM.

Let one number =  $x$

$$\Rightarrow 25 \times x = 5 \times 150 \quad 25 \times x = 5 \times 150$$

$$\Rightarrow x = 5 \times 150 \div 25 = 30 \quad x = 5 \times 150 \div 25 = 30$$

7. Answer: Option D

Explanation:

It is clear that  $504 = 2 \times 2 \times 2 \times 3 \times 3 \times 7$

  
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8. Answer: Option D

Explanation:

$$99 = 1 \times 3 \times 3 \times 11$$

=> Divisors of 99 are 1, 3, 11, 9, 33 and 99

$$101 = 1 \times 101$$

=> Divisors of 101 are 1 and 101

$$182 = 1 \times 2 \times 7 \times 13$$

=> Divisors of 182 are 1, 2, 7, 13, 14, 26, 91 and 182

$$176 = 1 \times 2 \times 2 \times 2 \times 2 \times 11$$

=> Divisors of 176 are 1, 2, 11, 4, 22, 8, 44, 16, 88, 176

Hence 176 has most number of divisors.

9. Answer: Option D

Explanation:

$$\text{LCM of } 3, 5, 7 \text{ and } 8 = 840$$

$$28523 \div 840 = 33 \text{ remainder} = 803$$

$$\text{Hence the least number which should be added} = 840 - 803 = 37$$

10. Answer: Option D

Explanation:

$$\text{LCM of } 12, 14, 18 \text{ and } 22 = 2772$$

Hence the least number which will be exactly divisible by 12, 14, 18 and 22 = 2772

$$2772 \div 2 = 1386$$

1386 is the number which when doubled, we get 2772

Hence, 1386 is the least number which when doubled will be exactly divisible by 12, 14, 18 and 22.

11. Answer: Option A

Explanation:

We know that angle traced by hour hand in 12 hrs =  $360^\circ$

Time duration from noon to 10 minutes past 5

  
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= 5 hours 10 minutes  
 $= 5 \times 60 = 310$  minutes = 5 hours 10 minutes

Hence the angle traced by hour hand from noon to 10 minutes past 5  
 $= 316 \times \frac{360}{12} = 316 \times 30 = 31 \times 5 = 155^\circ = 316 \times \frac{360}{12} = 316 \times 30 = 31 \times 5 = 155^\circ$

12. Answer: Option D

Explanation:

**Solution 1**

The two hands of a clock will be in the same straight line but not together between HH and (H+1)(H+1) o' clock at

$5H - 30$  minutes past H, when  $H > 6$   $(5H + 30)$  minutes past H, when  $H < 6$   
 $(5H - 30)$  minutes past H, when  $H > 6$   $(5H + 30)$  minutes past H, when  $H < 6$

Here  $H = 7$ .

Hands of the clock will point in opposite directions at

$(5 \times 7 - 30)$  minutes past 7

$= 5 \times 7 - 30 = 5 \times 7 - 30$  minutes past 7

$= 35 - 30 = 5$  minutes past 7

$= 5$  minutes past 7

13. Answer: Option C

Explanation

**Solution 1**

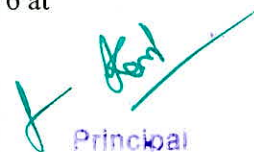
The two hands of the clock will be at right angles between HH and (H+1)(H+1) o' clock at  
 $(5H \pm 15)$  minutes past HH 'o' clock

Let's see the times at which right angles are formed between 5 and 6

Let's take  $H = 5$ . Hence the two hands will be at right angles between 5 and 6 at

$(5 \times 5 \pm 15)$  minutes past 5 'o' clock

$= (25 \pm 15)$  minutes past 5 'o' clock



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=10×1211=10×1211 minutes past 5 'o clock and 40×121140×1211 minutes past 5 'o clock

=12011=12011 minutes past 5 'o clock and 4801148011 minutes past 5 'o clock

=101011=101011 minutes past 5 'o clock and 4371143711 minutes past 5 'o clock

101011101011 minutes past 5 comes before 5.30. 4371143711 minutes past 5 comes between 5.30 and 6. The question is to find out the time between 5.30 and 6 when the hands of a clock will be at right angles. Hence the required time is 4371143711 minutes past 5

**14. Answer: Option A**

Explanation:

### Solution 1

Angle between hands of a clock

When the minute hand is behind the hour hand, the angle between the two hands at MM minutes past HH 'o clock

$$=30(H-M5)+M2=30(H-M5)+M2 \text{ degree}$$

When the minute hand is ahead of the hour hand, the angle between the two hands at MM minutes past HH 'o clock

$$=30(M5-H)-M2 \text{ degree}=30(M5-H)-M2 \text{ degree}$$

Here H = 5, M = 15 and the minute hand is behind the hour hand.

Hence the angle

$$=30(H-M5)+M2 =30(5-155)+152 =30(5-3)+7.5 =30 \times 2 + 7.5 =67.5^\circ =30(H-M5)+M2 =30(5-155)+152 =30(5-3)+7.5 =30 \times 2 + 7.5 =67.5^\circ$$

**15. Answer: Option B**

Explanation:

### Solution 1

Angle between hands of a clock

When the minute hand is behind the hour hand, the angle between the two hands at MM minutes past HH 'o clock

$$=30(H-M5)+M2=30(H-M5)+M2 \text{ degree}$$

When the minute hand is ahead of the hour hand, the angle between the two hands at MM minutes past HH 'o clock

$$=30(M5-H)-M2 \text{ degree}=30(M5-H)-M2 \text{ degree}$$

  
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Here  $H = 3$ ,  $M = 40$  and minute hand is ahead of the hour hand.

Hence the angle

$$=30(M-H)-M2 =30(40-3)-402 =30(8-3)-20 =30 \times 5 - 20 =130^\circ =30(M-H)-M2 =30(40-3)-402 =30(8-3)-20 =30 \times 5 - 20 =130^\circ$$

16. Answer: Option A

Explanation:

### Solution 1

Angle between hands of a clock

When the minute hand is behind the hour hand, the angle between the two hands at MM minutes past HH 'o clock

$$=30(H-M5)+M2=30(H-M5)+M2 \text{ degree}$$

When the minute hand is ahead of the hour hand, the angle between the two hands at MM minutes past HH 'o clock

$$=30(M5-H)-M2 \text{ degree}=30(M5-H)-M2 \text{ degree}$$

Here  $H = 8$ ,  $M = 30$  and minute hand is behind the hour hand.

Hence the angle

$$=30(H-M5)+M2 =30(8-305)+302 =30(8-6)+15 =30 \times 2 + 15 =75^\circ =30(H-M5)+M2 =30(8-305)+302 =30(8-6)+15 =30 \times 2 + 15 =75^\circ$$

17. Answer: Option B

Explanation:

The hands of a clock point in opposite directions (in the same straight line, making an angle  $180^\circ$  between them) 11 times in every 12 hours because between 5 and 7 they point in opposite directions at 6 'o clock only.

Hence the hands point in the opposite directions 22 times in a day.

This is already given as a formula and it's is better to learn the answer by heart as 22 which can save time in competitive exams.(However you should know the theory behind).

18. Answer: Option B

Explanation:

### Solution 1

  
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The two hands of a clock will be together between HH and (H+1)(H+1) o' clock at (60H11)(60H11) minutes past HH o' clock.

Here H = 3. Hands will be together at

60H1160H11 minutes past 3

=60×311=60×311 minutes past 3

=18011=18011 minutes past 3

=16411=16411 minutes past 3

19. Answer: Option B

Explanation:

The hands of a clock coincide 11 times in every 12 hours (Between 11 and 1, they coincide only once, at 12 o'clock).

12:00 am  
1:05 am  
2:11 am  
3:16 am  
4:22 am  
5:27 am  
6:33 am  
7:38 am  
8:44 am  
9:49 am  
10:55 am  
12:00 pm  
1:05 pm  
2:11 pm  
3:16 pm  
4:22 pm  
5:27 pm  
6:33 pm  
7:38 pm  
8:44 pm  
9:49 pm  
10:55 pm

  
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Hence the hands coincide 22 times in a day.

This is already given as a formula and it's better to learn the answer by heart as 22 which can save time in competitive exams. (However you should know the theory behind).

20.. Answer: Option A

Explanation:

Product of two numbers = Product of their HCF and LCM.

Let one number =  $x$

$$\Rightarrow 25 \times x = 5 \times 150 \Rightarrow x = 5 \times 150 / 25 = 30$$

$$\Rightarrow x = 5 \times 150 / 25 = 30$$

21. Answer: Option D

Explanation:

It is clear that  $504 = 2 \times 2 \times 2 \times 3 \times 3 \times 7$

22. Answer: Option C

Explanation:

Let present age of P and Q be  $3x$  and  $4x$  respectively.

Ten years ago, P was half of Q's age

$$\Rightarrow (3x-10) = \frac{1}{2}(4x-10) \Rightarrow 6x-20 = 4x-10 \Rightarrow 2x = 10 \Rightarrow x = 5$$

Total of their present ages

$$= 3x + 4x = 7x = 7 \times 5 = 35$$

23. Answer: Option C


Explanation:

Assume that Sunil's present age =  $x$ .

Then, father's present age =  $3x + 4 = 4x$

After 88 years, father's age =  $212$  times of Sunil's age

$$\Rightarrow (4x+88) = 212(x+88) \Rightarrow 4x+88 = 212x+18576 \Rightarrow 208x = 18488 \Rightarrow x = 243 = 8$$

  
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```
#include<stdio.h>
int add(int, int); /* Function prototype */

int main()
{
    int a = 4, b = 3, c;
    c = add(a, b);
    printf("c = %d\n", c);
    return 0;
}
int add(int a, int b)
{
    /* returns the value and control back to main() function */
    return (a+b);
}
```

**Output:**

c = 7

30. Answer: Option A

Explanation:

A function cannot be defined inside the another function, but a function can be called inside a another function.

*Kan*

*A*

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# Placement



STUTI  
CAREER GUIDANCE AND PLACEMENT CELL

## CERTIFICATE OF PERFORMANCE

*THIS IS TO CERTIFY THAT*

*Mr/Ms \_\_\_\_\_ has participated in  
“Vocational Education and Training (VET)” from 6/7/2015 to 5/8/2015  
organized by STUTI Team.*

CONVENOR

PRINCIPAL

## 2. REPORT ON CAREER COUNSELLING AND SOFT SKILL TRAINING

The Placement department of Sapthagiri College of engineering organized the Placement training on Career counselling and soft skill training from 27/7/2015 01/08/2015 and all the 3<sup>rd</sup> & 5<sup>th</sup> semester students attended the training program. The program was successfully organized and carried out by placement department.

The training program covered the following domains

1. Communication skill
2. HR Skills
3. Group Discussion
4. Mock interview

### FEW SCREENSHOTS OF THE PROGRAM



*Suma*

**SUMA VISHWANATH**  
Group Head HRD  
Sapthagiri College of Engineering  
Sapthagiri Institute of Medical  
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*Suma*

Convener

GROUP DISCUSSION

*Kamini*  
Principal

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