

# SSC CPO Exam Paper - 2017 "held on 04 July 2017" Shift-2

# (Quantitative Aptitude)

**QID**: 301 - If N =  $(\sqrt{7} - \sqrt{5})/(\sqrt{7} + \sqrt{5})$ , then what is the value of 1/N?

# **Options:**

1) 6 - √35

2) 6 +  $\sqrt{35}$ 

3) 7 +  $\sqrt{35}$ 

4) 7 -  $\sqrt{35}$ **Correct Answer:** 6 +  $\sqrt{35}$ 

QID: 302 - The sum of three consecutive even numbers is always divisible by \_\_\_\_\_.

# **Options:**

1) 12

2) 6

3) 18

4) 24 Correct Answer: 6 **QID**: **303** - How many positive factors of 24 are there?

#### **Options:**

1) 3

2) 4

3) 6

4) 8 **Correct Answer:** 8

**QID** : **304** - 4/5 part of a tank is filled with oil. After taking out 42 litres of oil the tank is 3/4 part full. What is the capacity (in litres) of the tank?

#### **Options:**

1) 420 2) 630 3) 840 4) 1680 **Correct Answer:** 840

QID: 305 - What is the largest four digit number which is a perfect square?

#### **Options:**

9704
 9801
 9901
 9999
 Correct Answer: 9801

**QID**: **306** - Two inlet pipes can fill a cistern in 20 and 24 hours respectively and an outlet pipe can empty 160 gallons of water per hour. All the three pipes working together can fill the empty cistern in 40 hours. What is the capacity (in gallons) of the tank?

#### **Options:**

1) 1200 2) 2400 3) 3600 4) 1800 **Correct Answer:** 2400

**QID** : **307** - P alone can complete the work in 5 days, Q alone can do same work in 6 days and R alone can do the same work in 12 days. They jointly complete the work and earn Rs 5400. What is the share of R?

#### **Options:** 1) 1000 2) 1200 3) 1500 4) 1800 **Correct Answer:** 1000

**QID** : **308** - After giving two successive discounts of 20% and 25% a cycle is sold for Rs 4200. What is the marked price (in Rs) of the cycle?

# **Options:**

1) 7200

2) 7000

3) 6500

4) 6200 **Correct Answer:** 7000

**QID** : **309** - The marked price of an article is 60% more than its cost price. What should be the discount (in %) offered by the shopkeeper so that he earns a Profit of 12%?

# **Options:**

1) 12 2) 25 3) 30 4) 60 **Correct Answer:** 30

**QID** : **310** - The ratio of the speed of P, Q and R is 10 : 12 : 15 respectively. What is the ratio of the time taken by P, Q and R respectively to cover the same distance?

# **Options:**

1) 10: 12: 15
 2) 15: 12: 10
 3) 6: 5: 4
 4) 4: 5: 6
 Correct Answer: 6: 5: 4

**QID**: **311** - Three bottles of equal capacity are containing a mixture of milk and water in ratio 2 : 1, 3 : 7 and 4 : 11 respectively. These three bottles are emptied into a large bottle. What is the ratio of milk and water respectively in this large bottle?

**Options:** 1) 37 : 53 2) 37 : 90 3) 37 : 30 **4**) 7 : 30 **Correct Answer:** 37 : 53

**QID** : **312** - The average of 11 results is 182. If the average of first 6 results is 199 and that of the last 6 results is 161, then what will be the 6th result?

#### **Options:**

1) 79 2) 118.5 3) 158 4) 237 **Correct Answer:** 158

**QID** : **313** - The average of 45 results was calculated as 27 but later it was found that while calculating 39 was taken as 93 by mistake, then what will be the correct average?

#### **Options:**

1) 25.8

2) 26.8

3) 27.2

4) 28.2 Correct Answer: 25.8

**QID** : **314** - A shopkeeper professes to sell his goods at cost price but uses a 960 gm weight instead of 1 kilogram weight. What is the profit percentage of the shopkeeper?

 $\frac{1}{1}$   $\frac{1}{4}$   $\frac{1}{16}$   $\frac{1}{16}$  $\frac{1}{1$ 

**QID** : **315** - A person sold a book for Rs 21 and got a loss percentage which was numerically equal to the cost price. What is the cost price (in Rs) of the book?

#### **Options:**

30
 70
 Both 30 and 70
 Cannot be determined

**Correct Answer:** Both 30 and 70

**QID**: **316** - If length of a rectangle is increased by 10% and breadth is increased by 15%, then what will be the percentage increase in the area of rectangle?

#### **Options:**

1) 25.5

2) 25

3) 28.4

4) 26.5 **Correct Answer:** 26.5

**QID** : **317** - If the base of triangle is increased by 10% and height is decreased by 20%, then what will be the percentage change in the area of a triangle?

#### **Options:**

1) 30 2) 20 3) 22 4) 12 **Correct Answer:** 12

**QID** : **318** - A bus starts running with some initial speed and its speed increases every hour by 9 km/hr. If it takes 11 hours to cover a distance of 572 km, then what was the initial speed (in km/hr) of the bus?

#### **Options:**

1) 3.5 2) 7 3) 10.5 4) 14 **Correct Answer:** 7

# QID : 319 -

A boat goes 15 km upstream and 22 km downstream in 5 hours. It goes 20 km upstream and  $\frac{55}{2}$  km downstream in  $\frac{13}{2}$  hours. What is the speed (in km/hr) of stream?

एक नाव 5 घंटे में 15 कि.मी. धारा के प्रतिकूल तथा 22 कि.मी. धारा के अनुकूल जाती है। वह  $\frac{13}{2}$  घंटे में 20 कि.मी. धारा के प्रतिकूल तथा  $\frac{55}{2}$  कि.मी. धारा के अनुकूल जाती है। धारा की गति (कि.मी. प्रति घंटा में) क्या है?

# **Options:**

1) 3

2) 5

3) 8

#### 4) 11 **Correct Answer:** 3

**QID** : **320** - If a certain sum becomes 4 times in 4 years at compound interest, then in how many years, it will become 64 times?

# **Options:**

1) 5
 2) 12
 3) 16
 4) 24
 Correct Answer: 12

QID: 321 - What is the simple interest on Rs 7200 in 7 years at the rate of 14% per annum?

**Options:** 1) 6800 2) 6812 3) 7056 4) 7096 **Correct Answer:** 7056

QID : 322 -

The table given below shows the marks obtained by six students in 5 different subjects.

नीचे दी गई तालिका में छह छात्रों द्वारा 5 विषयों में प्राप्त किए गए अंकों को दर्शाया गया है।

Student छাत्र	Subject / विषय					
	P	Q	R	S	т	
A	72	75	80	82	93	
В	87	94	78	87	95	
С	68	79	55	91	72	
D	55	69	74	81	76	
E	74	88	83	93	87	
F	86	92	95	81	82	

Maximum marks for each subject is 100.

प्रत्येक विषय के लिए अधिकतम अंक 100 है।

What are the total marks obtained by student D in all subjects?

# **Options:**

1) 343

2) 355

3) 338



4) 362 **Correct Answer:** 355

QID : 323 -

The table given below shows the marks obtained by six students in 5 different subjects.

नीचे दी गई तालिका में छह छात्रों द्वारा 5 विषयों में प्राप्त किए गए अंकों को दर्शाया गया है।

Student ত্যার	Subject / विषय					
	P	Q	R	S	τ	
A	72	75	80	82	93	
В	87	94	78	87	95	
С	68	79	55	91	72	
D	55	69	74	81	76	
E	74	88	83	93	87	
F	86	92	95	81	82	

Maximum marks for each subject is 100.

प्रत्येक विषय के लिए अधिकतम अंक 100 है।

What is the average of total marks obtained by all six students in subject R?

# **Options:**

1) 77.5

2) 76.2

3) 93

4) 83.4 Correct Answer: 77.5

# QID: 324 -

The table given below shows the marks obtained by six students in 5 different subjects.

नीचे दी गई तालिका में छह छात्रों द्वारा 5 विषयों में प्राप्त किए गए अंकों को दर्शाया गया है।

Student ত্যার	Subject / विषय					
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С	68	79	55	91	72	
D	55	69	74	81	76	
E	74	88	83	93	87	
F	86	92	95	81	82	

Maximum marks for each subject is 100.

# प्रत्येक विषय के लिए अधिकतम अंक 100 है।

What is the aggregate percentage of marks obtained by student C in all the five subjects?

# **Options:**

1) 71 2) 75 3) 76 4) 73 **Correct Answer:** 73

QID : 325 -

The table given below shows the marks obtained by six students in 5 different subjects.

नीचे दी गई तालिका में छह छात्रों द्वारा 5 विषयों में प्राप्त किए गए अंकों को दर्शाया गया है।

Student ত্যার	Subject / विषय					
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С	68	79	55	91	72	
D	55	69	74	81	76	
E	74	88	83	93	87	
F	86	92	95	81	82	

Maximum marks for each subject is 100.

# प्रत्येक विषय के लिए अधिकतम अंक 100 है।

Marks obtained by student B is how much percent more than the marks obtained by A?

# **Options:**

1) 8.3

2) 7.4

3) 9.7

4) 11.1 **Correct Answer:** 9.7

**QID** : **326** - The perimeter of base of a right circular cone is 88 cm. If the height of the cone is 48 cm, then what is the total surface area (in  $cm^2$ ) of the cone?

# **Options:**

1) 2200

2) 1100
 3) 2354
 4) 2816
 Correct Answer: 2816

**QID** : **327** - What is the length of the longest rod that can be placed in a room which is 3 metres long, 4 metres broad and 5 metres high?

#### **Options:**

1) 5
 2) 12
 3) 5√2
 4) 6√2
 Correct Answer: 5√2

QID: 328 - If the area of a square is 48, then what is the diagonal of the square?

# **Options:**

1) 4√6

2) 4√3

3) 4√2

4)  $3\sqrt{6}$ **Correct Answer:**  $4\sqrt{6}$ 

**QID : 329 -** A cylindrical well of height 20 metres and radius 14 metres is dug in a field 72 metres long and 44 metres wide. The earth taken out is spread evenly on the field. What is the increase (in metre) in the level of the field?

# **Options:**

1) 6.67 2) 3.56 3) 5.61 4) 4.83 **Correct Answer:** 4.83

**QID** : **330** - Radius of hemisphere is thrice than that of a sphere. What is the ratio of total surface area of hemisphere to that of sphere?

# **Options:**

1) 27 : 8 2) 21 : 4 3) 27 : 4 4) 6 : 1 Correct Answer: 27:4

**QID**: **331** - If x + y = 4, then what is the value of  $x^3 + y^3 + 12xy$ ?

#### **Options:**

1) 16 2) 32 3) 64 4) 256 **Correct Answer:** 64

#### QID: 332 -

If  $x^4 + \frac{1}{x^4} = 198$  and x > 0, then what is the value of  $x^2 - \frac{1}{x^2}$ ? यदि  $x^4 + \frac{1}{x^4} = 198$  तथा x > 0 हो, तो  $x^2 - \frac{1}{x^2}$  का मान क्या है? **Options:** 

# 1) 14

2) 2√7

3) 10√2

4) 10 **Correct Answer:** 14

**QID**: **333** - If 3x - [1/(3x)] = 9, then what is the value of  $x^2 + [1/(81x^2)]$ ?

# **Options:**

1)7 2) 83/9 3) 11 4) 121/9 **Correct Answer: 83/9** 

**QID**: **334** - If  $x^3 - y^3 = 112$  and x - y = 4, then what is the value of  $x^2 + y^2$ ?

# **Options:** 1) 16 2) 20 3) 24 4) 28 **Correct Answer:** 24

QID : 335 -

If 
$$x = 5 - \frac{1}{x}$$
, then what is the value of  $x^5 + \frac{1}{x^5}$ ?

यदि 
$$x = 5 - \frac{1}{x}$$
 हो, तो  $x^5 + \frac{1}{x^5}$  का माल क्या है?

# **Options:**

1) 625

2) 3125

3) 2525

#### 4) 2500 **Correct Answer:** 2525

**QID** : **336** - In  $\triangle ABC$ ,  $\angle A : \angle B : \angle C = 3 : 3 : 4$ . A line parallel to BC is drawn which touches AB and AC at P and Q respectively. What is the value of  $\angle AQP - \angle APQ$ ?

#### **Options:**

1) 12

2) 18

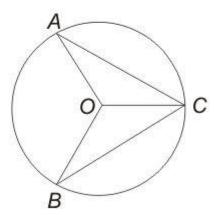
3) 24

4) 36 **Correct Answer:** 18

# QID: 337 -

In the given figure, O is the center of the circle,  $\angle CAO = 35^{\circ}$  and  $\angle CBO = 45^{\circ}$ . What is the value (in degrees) of  $\angle AOB$ ?

दी गई आकृति में, O वृत्त का केंद्र है, ∠CAO = 35° तथा ∠CBO = 45° है। ∠AOB का मान (डिग्री में) क्या है?



# **Options:**

1) 90

2) 110

3) 160

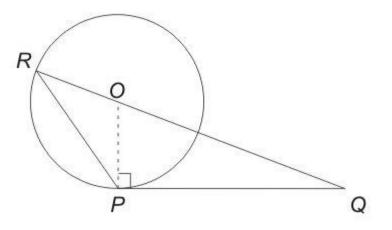
4) 130 **Correct Answer:** 160

QID: 338 -



In the given figure,  $\Delta PQR$  is drawn such that PQ is tangent to a circle whose radius is 10 cm and QRpasses through centre of the circle. Point *R* lies on the circle. If QR = 36 cm, then what is the area (in cm<sup>2</sup>) of  $\Delta PQR$ ?

दी गई आकृति में,  $\Delta PQR$  को इस प्रकार बनाया गया है कि PQ एक वृत्त की रूपर्श रेखा है जिसकी त्रिज्या 10 से.मी. है तथा QR वृत्त के केंद्र से होकर गुजरती है। बिंदु R वृत्त पर स्थित है। यदि QR = 36 से.मी. है, तो  $\Delta PQR$ का क्षेत्रफल (से.मी.<sup>2</sup> में) क्या होगा?



# **Options:**

1) 134.5

2) 148

3) 166.15

# 4) 180 Correct Answer: 166.15

**QID** : **339** - The side QR of  $\triangle$ PQR is produced to S. If  $\angle$ PRS = 105° and  $\angle$ Q = (1/2) $\angle$ P, then what is the value of  $\angle$ P?

# **Options:**

1) 45

2) 60

3) 70

4) 75 **Correct Answer:** 70

**QID : 340 -** The perimeter of an isosceles triangle is 64 cm and each of the equal sides is 5/6 times the base. What is the area (in cm2) of the triangle?

**Options:** 

1) 169

2) 192

3) 196

4) 184 **Correct Answer:** 192

QID: 341 -

What is the simplified value of 
$$\frac{\sqrt{\sec^2 \theta + \csc^2 \theta}}{2}$$
?  
 $\frac{\sqrt{\sec^2 \theta + \csc^2 \theta}}{2}$  का सरलीकृत मान क्या है?  
Options:

1) cosec  $2\theta$ 

2) sec2 θ

3) cosec  $\theta$  sec  $\theta$ 

4) tan θ Correct Answer: cosec 2θ

QID : 342-  
If 
$$\frac{x - x \tan^2 15^\circ}{1 + \tan^2 15^\circ} = \sin 60^\circ + \cos 30^\circ$$
, then what is  
then what is the value of x?  
 $articer \frac{x - x \tan^2 15^\circ}{1 + \tan^2 15^\circ} = \sin 60^\circ + \cos 30^\circ$  e, cfl x and  
HIFT area area ered and the second seco

3) 1√2

4) √3/2 **Correct Answer:** 1/2

**QID** : **345** - The angles of elevation of the top of a building from the top and bottom of a tree are  $30^{\circ}$  and  $60^{\circ}$  respectively. If the height of the tree is 50 m, then what is the height of the building?

# **Options:**

1) 50√3

2) 75

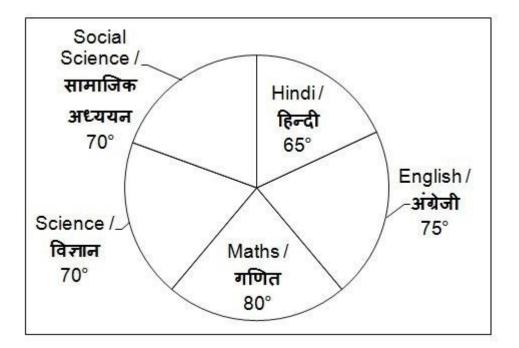
3)  $50(\sqrt{3}+1)$ 

4) 75√3 **Correct Answer:** 75

QID : 346 -

The given pie chart shows the marks obtained (in degrees) by a student in different subjects. The total marks obtained by the student in the examination is 432.

दिए गए वृत्त चित्र में एक छात्र द्वारा विभिन्न विषयों में प्राप्त अंकों (डिग्री में) को दर्शाया गया है। छात्र द्वारा परीक्षा में प्राप्त कुल अंक 432 है।



What is the total of marks obtained in Hindi and Maths?

# **Options:**

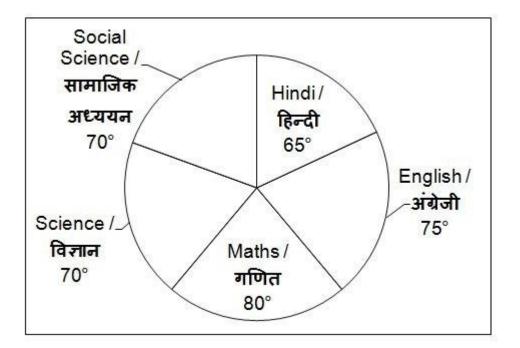
1) 178 2) 172 3) 174 4) 182 **Correct Answer:** 174

QID: 347 -



The given pie chart shows the marks obtained (in degrees) by a student in different subjects. The total marks obtained by the student in the examination is 432.

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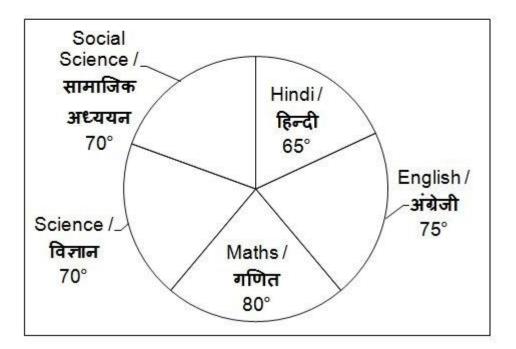
The marks obtained in science is what percentage of the total marks?

# **Options:**

1) 20.14 2) 18.12 3) 17.16 4) 19.44 **Correct Answer:** 19.44 QID: 348 -

The given pie chart shows the marks obtained (in degrees) by a student in different subjects. The total marks obtained by the student in the examination is 432.

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The marks obtained in Maths is how much percent more than the marks obtained in Social Science?

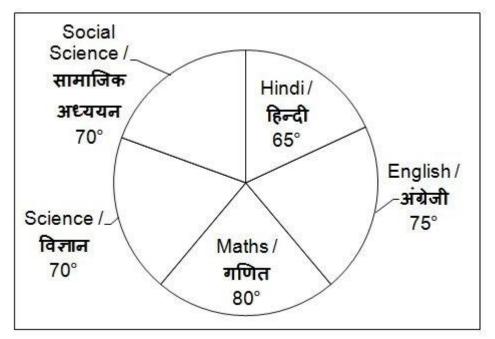
# **Options:**

1) 7.14 2) 14.28 3) 9.13 4) 10.41 **Correct Answer:** 14.28

QID: 349 -

The given pie chart shows the marks obtained (in degrees) by a student in different subjects. The total marks obtained by the student in the examination is 432.

दिए गए वृत्त चित्र में एक छात्र द्वारा विभिन्न विषयों में प्राप्त अंकों (डिग्री में) को दर्शाया गया है। छात्र द्वारा परीक्षा में प्राप्त कुल अंक 432 है।



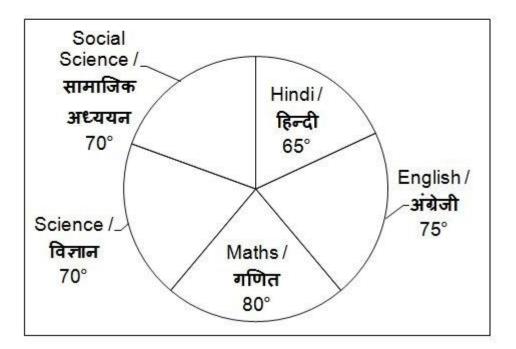
In how many subjects marks obtained are more than the average marks per subject?

# **Options:**

1) 3 2) 1 3) 2 4) 4 **Correct Answer:** 2 QID: 350 -

The given pie chart shows the marks obtained (in degrees) by a student in different subjects. The total marks obtained by the student in the examination is 432.

दिए गए वृत्त चित्र में एक छात्र द्वारा विभिन्न विषयों में प्राप्त अंकों (डिग्री में) को दर्शाया गया है। छात्र द्वारा परीक्षा में प्राप्त कुल अंक 432 है।



If the maximum marks per subject is 100, then what is the total marks (in percentage) obtained in English and Hindi together?

Options: 1) 168 2) 68 3) 76 4) 84 Correct Answer: 84



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