## **English Language**

## Directions (Q. 1-5) Study the following information carefully and answer the questions below:

The author, Mrs Susan Pritchett Post, was motivated to write her impressions when her husband, Everett Post worked for the US Agency for International Development in Albania on housing contracts. She worked at the National Housing Agency on a part – time basis.

Post describes well her arrival and the first few months of settling down – living conditions, shopping, having some home improvements made, contacts with her neighbors and other Albanians, She wondered how they found the optimism and energy to manage their lives. With her Albanian language teacher, MrsKsanthipiDodi, she met a group of women in Tirana with a variety of backgrounds, keen to speak from the heart about their experiences and personal issues. The question rose in her mind – what has given the Albanian women strength, not only to survive, but also to lead meaningful and fulfilled lives with good – heartedness and optimism? It was clear that the answer could only be provided by representative findings of women all over the country, those of different ages, background and political viewpoints. So she embarked on country - wide interviews, incorporating as much as possible the actual words of the some she met, 200 in all. Out of her respect and growing admiration for the Albanian women she wanted to present her work to the outside world as an inspiration to others and in the hope that this book will bring healing to the wounded society. Dirite, who served her country as a partisan in the War of Liberation, was imprisoned for 13 years and exited. She can not smile or laugh any more, though she recounts humorous stories of events that took place during her years of torture and interrogation, and despite her age (78) and physical disabilities, she burns with desire to be of service to her country today.

Safide lives in a village that has water once a month. She works the land, keeps the house clean and prepares excellent meals for her family, though the family has to carry home on their backs and heads water, produce and animal feed. She remains optimistic with a ready smile and eagerness to help others.

Vjallca sells bananas in the street near the fruit market in Tirana, trying to augment her husband's disability pension of 20 a month. She makes 1 or 1.5 lek (about one cent) on each banana she sells, but when she stays at home to look after her husband She cannot contribute even that small amount.

Teuta (18) lives in a village. Though she wanted to continue studying, her father took her out of school to work on the land, help with the housework and await an arranged marriages. This book reports in their own words, the life stories of Albanian women of all ages and backgrounds, not as a scientific study but against well founded presentations of the 1996 environment. The author has carefully observed conditions of housing, water and electricity, retailing, medical facilities, travel, effects of the Kanun, besides the individual circumstances of the people she interviewed. The book made a deep impression on me, not only because I had spent two weeks in Albania at the time that she was carrying out his work.

Susan Pritchett Post lived in Tirana for about three years with her husband, Everett, her son, Jacko and the family adopted Albanian daughter, Anna. In March, 1997, they were ripped from Albania under a forced evacuation. They could only say a hasty goodbye to Everett and under difficult conditions returned via Italy to USA, where she finished and published her book last year

- 1. What is the occupation of the author?
- a) The author is working with the US agency for International Development in Albania
- b) The author is a part time worker at the National Housing Agency
- c) The author is a hose manager
- d) None of The Above



- e) Both (a) and (b)
- 2. According to the passage, which of the following cannot be inferred as possible components of settling down in a new place?
- a) Calling a carpenter and fixing a wardrobe
- b) Enquiring about the nearest grocery store
- c) Listing the telephone number of the officer of the National Housing Agency
- d) Familiarizing oneself with some of the neighbors and locals
- e) None of The Above
- 3. According to Susan Post, which of the following can best describe the Albanian society?
- a) Society of wounded feelings
- b) Self contented society
- c) Improving society (but this improvement will take time)
- d) All of The Above
- e) Only (b) and (c)
- 4. What, according to the passage, could not be cited as possible reason for Susan post embarking on a country wide journey for interviews?
- a) To find reasons for the strength of the Albanian women
- b) To find reasons for the moral strength of the Albanian women
- c) To find reasons for the Albanian society being so wounded
- d) All of The Above
- e) None of (a), (b) or (c)
- 5. What according to the passage is the common link between Dirite, Safide, Jacko, Vjallca and Teuta?
- a) They're all living in villages
- b) They're all Albanian women
- c) None of Them are dejected in life
- d) None of The Above
- e) Only (a) and (c)

Directions (Q. 6-10) In the sentence below a word is given as blank, below the sentence five words/group of words are suggested, one of which can replace the blank. Find the appropriate word/group of words in each case.

Two pieces in particular \_\_\_\_\_(6) the range of issues covered by the Journal. In a package of

articles on the 1973 Endangered Species Act, Gardner Brown Jr. and Jason Shogren, professors at the
Universities of Washington and Wyoming respectively make a plea for reforming the act with sound
economic(7) in mind. The authors are sensitive to the charge by some environmentalists
that economists know the price of everything and the value of nothing. But saving all species at any
cost, they say, may undervalue other priorities such as employment or even other environmental
concern.
Elsewhere in this issue, New York University economist Edward Wolff presents an
(8) of new data from the Federal Reserve's Survey of Consumer Finances on wealth
distribution in the United States. The data confirms a decline in mean and median household wealth
between 1983 and 1995 as well as a greater concentration of wealth in the highest percentiles of the
US population. Wolff(9) much of the disparity, already the highest in the industrialized world,
on the rise in the price of financial assets, a product of the prolonged bubble dominating the stock
exchanges. Although this issue concentrates on US public policy, the globalization of policy sciences
means that other countries closely watch American initiatives. It is unfortunate that the Journal of
Economic(10) is not offered independently (subscriptions require membership); because it
represents the best in policy analysis today.



- 6. a) Obscure
  b) Conceal
  c) Evince
  d) Illustrate
  e) None of The Above

  7. a) Ethic

  b) Prescript

  c) Ambiguity

  d) Principles

  e) None of The Above
- 8. a) Scarcity
  - b) Profusion
  - c) Abundance
  - d) Dearth
  - e) None of The Above
- 9. a) Reproach
  - b) Disfavor
  - c) Compliment
  - d) Blames
  - e) None of The Above
- 10. a) Overview
  - b) Viewpoint
  - c) Perspective
  - d) Reform
  - e) None of The Above

## Directions (Q. 11-15) Fill in the blanks with an appropriate option.

11.	Wearing a sagety helmet is	in this area.	
	a) obligatory	b) option	c) compulsion
	d) resolved	e) contented	•
12.	Some courses are optional but M	Maths and English are	
	a) compulsion	b) compulsory	c) essential
	d) referential	e) important	
13.	Jess caused her parents a lot of	when she was a teenage	r.
	a) problem	b) yearning	c) anxiety
	d) vex	e) compulsion	•
14.	In all Hursh will get th	e job.	
	a) likelihood	b) odds	c) options
	d) candidates	e) evens	•
15.	At first there were some	_ with the software, but is's okay	y now.
	a) pitalls	b) impediments	c) ordeal
	d) snags	e) None of these	,





# Directions (Q. 16-20) Study the information carefully and rearrange it to make a meaningful paragraph.

- 16. (A) Managerial accountability, whether in the public or the private sector, similarly requires that mangers be answerable for the tasks which they have contracted to perform, according to agreed standards of competence.
  - (B) In parliamentary systems, ministers are held to account through oral and written questions in some cases through 'interpellation', that is, through requiring them to give a detailed response to a question on policy or administration.
  - (C) Regimes in which rulers cannot be held to account, either by representatives or by judges, are called arbitrary and authoritarian.
  - (D) Political accountability is the hallmark of responsible and representative government.
  - (E) Political accountability requires the actions of politicians, or public officials, whether they be administrative, ethical or financial, to be open to inspection, scrutiny and challenge.

a) DEBCA

b) EDBCA

c) CDEBA

d) DEBAC

e) BACDE

- 17. (A) Their aim was to write about everyday phenomena, and to use words and images for their primary, stripped-down meanings, without metaphor, clogged syntax or other forms of 'poeticizing'.
  - (B) The acmeists were particularly opposed to the mysticism and erotic suggestiveness of symbolist writing, and to the experiments of Mayakovsky and the surrealists.
  - (C) The idea of cleansing language, of using words for words sake alone, has been a recurring feature of poetry, not least in the 20<sup>th</sup> century (for example in the work of T.S. Eliot and William Carlos Williams) but the acmeists, in a way characteristic of artists in the 1910s, were the only ones to give it a name and a specific agenda.
  - (D) Acmeism (from Greek ame, 'point') was a movement in Russian poetry of the 1920s led by the writers NiloaiGumilev and Sergei Gorodetsky, and followed by Anna Akmatova and Osip Mandelstam.
  - (E) They published a magazine, Apollo, from, 1909-17, and were denounced by the authorities as decadent and 'individualist': socialism demanded realism of a rather different kind.

a) BDAEC

b) CDBAE

c) CBDAE

d) DABCE

e) ABCDE

- 18. (A) Not all actions are bodily movements, and the causal theory of action also applies to mental actions such as imagining and calculating.
  - (B) It is not enough for imagining a teddy bear that one has an image as of a teddy bear.
  - (C) If a hallucinogenic drug causes me to have an image as of a teddy bear, then I have not imagined a teddy bear, since my having the image as of a teddy bear is something that has happened to me, rather than an action of mine.
  - (D) A mental event is an action only if it is caused by an appropriate intention of the subject's.
  - (E) Having an image is an action of mine only if it intention. And if, as a matter of complete coincidence, I intended to imagine a toy just before a hallucinogenic drug caused me to have an image as of a teddy bear, then I have not imagined a teddy bear.

a) ABCED

b) DAEBC

c) ABECD

d) DABEC

e) BADCE

- 19. (A) Fossil evidence suggests that the mammals underwent adaptive radiation to produce the range of mammal types extant today.
  - (B) Adaptive radiation, in the life sciences, refers to the differentiation (or anagenesis) of one or a few species into many to fill a large number of related ecological niches by adaptation.
  - (C) Thus the first bird species may have given rise to many more bird species by adaptive radiation.



- (D) Typically, a species adapts a colonize a new habitat and, this adaptation opening up a new range of niches, adapts again to fill the new niches which are presented.
- a) BADC

b) BDCA

c) CBAD

d) CBDA

- e) ABCD
- 20. (A) It has clearly done much good by bringing many useful inventions, ideas and by-products of major research programmes to a wide number of people.
  - (B) But to say that this is till all it does would be too superficial.
  - (C) Advertising is arguably a main vehicle of social communication, and as such, it has become the subject of much critical comment and even concern.
  - (D) Advertising was conceived essentially as a kind of social, consumer rhetoric: a way of publicly praising goods in order to encourage or persuade the public to use or buy them.
  - a) CABD

b) CDBA

c) DCAB

d) DABC

e) BDCA

## Directions (Q. 21-23) Choose the option which is the antonym of the word mentioned.

- 21. Proletariat
  - a) Rationalist
  - b) Evangelist
  - c) Bourgeoisie
  - d) Marxist
  - e) None of these
- 22. Boundless
  - a) Further
  - b) Astute
  - c) Abutting
  - d) Finite
  - e) None of these
- 23. Braggart
  - a) Modest
  - b) Harangue
  - c) Adept
  - d) Competent
  - e) None of these

## Directions (Q. 24-25) Choose the option which is a synonym or closest in meaning to the word.

- 24. Stingy
  - a) Amicable
  - b) Penurious
  - c) Parsimonious
  - d) Frugal
  - e) None of these
- 25. Persistence
  - a) Perilous
  - b) Sedulity
  - c) Pertinacity
  - d) Plodding
  - e) None of these





Directions (Q. 26-30) Read each sentence to find out whether there is any grammatical or idiomatic error in it. The error, if any, will be in one part of the sentence. The number of that part is the answer. If there is 'No error', the answer is (e). (Ignore errors of punctuation, if any)

- 26. (a) During an hour-long meeting Naveen asked Mukesh (b) keeping in mind the power and position he holds (c) as a senior police officer and adviced him (d) to be careful in future so that such things do not recur. (e) No error
- 27. (a) The project was initiated in 2011 (b) and was to be funded by Universal Service Obligation Fund (c) with the aim of providing (d) broadband connectivity in over 2 Lakh gram panchayats. (e) No error
- 28. (a) A farmers body approached the National Green Tribunal (b) against the demolition drive on their farms (c) carried in by DDA in pursuance to the green panel's ban (d) order on cultivation of edible crop on flood plains of the Yamuna. (e) No error
- 29. (a) The Delhi High Court sought the response of AIIMS forensic department head (b) who was alleged discrimination, after he claimed (c) to have refused to act unprofessionally (d) in the SunandaPushkar autopsy matter. (e) No error
- 30. (a) After receiving complaints, Gurgaon police informed (b) the District Town and country planning department, (c) which found out that the builder (d) had not even began construction. (e) No error

## **Reasoning Ability**

Directions (Q. 31-35) Each of these question is followed by two statements numbered I and II. Decide whether the data given in the statements are sufficient to answer the question. Mark answer as

#### Give answer

- (a) If Statement I alone is sufficient but Statement II alone is not sufficient to answer the question
- (b) If Statement II alone is sufficient but Statement I alone is not sufficient to answer the question.
- (c) If both Statements I and II together are sufficient to answer the question but neither Statements alone is sufficient.
- (d) If Statements I and II together are not sufficient to answer the question
- (e) None of these
- 31. Who types at a faster rate, Navin or Sapan?
  - I. The difference between their typing rates is 10 words per minute.
  - II. Sapan types at a constant rate of 80 words per minute.
- 32. If we assume a constant reading rate, can Joel finish the book in 6 h?
  - I. Joel reads 54 pages an hour.
  - II. In 2 h, he reads half the book.
- 33. In a certain packing houses, grapefruit are packed in bags and the bags are packed in cases. How many grapefruits are in each case, that is packed?
  - I. The grapefruits always packed 5 to a bag and the bags are always packed 8 to a case.
  - II. Each case is always 80% full.
- 34. How many hits must a batsman get to raise his batting average to 300?
  - I. He has batted, 56 times.
  - II. He has 14 hits now.
- 35. For a certain bottle and cork, what is the price of the cork?



- I. The combined price of the bottle and cork is Rs.95.
- II. The price of the bottle is Rs.75 more than the price of the cork.

Directions (Q. 36-40) Read each sentence to find out whether there is any grammatical error in it. The error, if any will be in one part of the sentence, the number of that part is the answer. If there is no error, then the answer is (e). (Ignore the errors of punctuation, if any).

- 36. Our housing society comprises (a)/ six block and thirty flats (b)/in an area of (c)/about thousand square meters (d)/ No Error (e)
- 37. Still remaining in the ancient castle (a)/are the Duke's collection of early Dutch paintings (b)/which will be (c)/donated to a museum(d)/No Error (e)
- 38. Computer education (a)/in universities and colleges today(b)/leaves much (c)/to be desired(d)/No Error (e)
- 39. Everyone knows (a)/that the tiger (b)/ is faster (c)/ of all animals (d)/No Error (e)
- 40. When he (a)/ had got what (b)/ he wanted (c)/ he has gone home (d)/No Error (e)

Directions (Q. 41-45) In the following questions, the symbol @, ©, \$, % and #are used with the following meaning as illustrated below.

- 'A \$ B' means 'A is not smaller than B'
- 'A # B' means 'A is not greater than B'
- 'A @ B' means 'A is neither smaller than nor equal to B'
- 'A © B' means 'A is neither smaller than nor greater than B'
- 'A % B' means 'A is neither greater than nor equal to B'

Now, in each of the following questions, assuming the given statements to be true, find which of the three Conclusions I, II and III given below them is/are definitely true and give your answer accordingly?

#### 41. Statement

H % J, J © N, N @ R

#### Conclusions

- I. R % J
- II. H@J
- III. N@H
- (a) Only II is true
- (b) I and III are true
- (c) Only I is true
- (d) Only III is true
- (e) None of The Above

#### 42. Statement

M @ J, J \$ T, T © N

## Conclusions

- I. N#J
- II. T % M
- III. M@N
- (a) I and II are true
- (b) II and III are true
- (c) I and II are true
- (d) All are True
- (e) None of The Above

#### 43. Statement

D © K, K # F, F @ P

## Conclusions



- I. P @ D II. K # P
- III. F\$D
- (a) Only II is true
- (b) I and II are true
- (c) Only III is true
  (d) II and III are true

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- (e) None of The Above

#### 44. Statement

R # D, D \$ M, M © N

#### **Conclusions**

- I. R # M II. N # D III. N \$ R
- (a) Only I is true
- (b) Only II is true
- (c) Only III is true
- (d) None is true
- (e) None of The Above

#### 45. Statement

K © P, P @ Q, Q \$ R

#### **Conclusions**

- I. K@R II. R%P III. Q%K
- (a) I and II are true
- (b) II and III are true
- (c) Only III is true
- (d) All are true
- (e) None of The Above

Directions (Q. 46-50) In each of the questions below are given four statements followed by three conclusions numbered I, II and III. You have to take the given statements to be true even, if they seem to be at variance with commonly known facts. Read all the conclusion(s) and then decide which of the given conclusions logically follow(s) from the given statements disregarding commonly known facts.

46. **Statements** Some pens are sticks.

Some sticks are canes.
All canes are scales.
No scale is weight.

**Conclusions** I. Some sticks are scales.

II. No stick is scale.
III. No cane is weight.

- a) Either I or II follows
- b) I and III follow
- c) Either I or II and III follow
- d) All I, II and III follow
- e) None of these



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47. **Statements** Some folders are boxes.

Some boxes are bags.
All bags are containers.
Some bags are sacks.

**Conclusions** I. No folder is bag.

II. Some boxes are containers.

III. Some sacks are containers.

a) I and II follow

b) II and III follow

c) I and III follows

d) All follow

e) None follows

48. **Statements** Some insects are pests.

All pests are birds. No bird is amphibian.

All amphibians are animals.

**Conclusions** I. No animal is bird.

II. Some insects are birds.

III. No pests are amphibians.

a) Only I follows

b) Only II follows

c) Only III follows

d) II and III follow

e) None of these

49. **Statements** Some shoes are socks.

All socks are towels. All towels are bedsheets. No bedsheet is blanket. I. No towel is blanket.

II. Some shoes are towels.

III. Some shoes are bedsheets.

a) I and II follow

b) II and III follow

c) I and III follow

d) All follow

**Conclusions** 

e) None of these

50. **Statements** Some fruits are flowers.

Some flowers are buds.

No bud is leaf.

All leaves are plants.

**Conclusions** I. No plant is bud.

II. Some plants are flowers. III. Some buds are fruits.

a) None follows

b) Only I follows

c) II and III follow

d) Only III follows

e) None of these



Directions (Q. 51-55) Study the following information carefully and answer the questions given below.

An organization wants to recruit system analysts. The following conditions apply.

#### The candidate must

- (i) Be an engineering graduate in computer/IT with at least 60% marks.
- (ii) Have working experience in the field of computer at least for 2 years after acquiring the requisite qualification.
- (iii) Have completed minimum 25 years and maximum 30 years of age as on 01.12.2013.
- (iv) Be willing to sign a bond for Rs.50000.
- (v) Have secured minimum 55% marks in selection test.

However, if the candidate fulfills all other conditions.

#### **Except**

- (a) At (i) above, but is an Electronics Engineer with 65% or more marks the case is to be referred to the General Manager-IT.
- (b) At (iv) above, but has an experience of at least 5 years as a Software Manager, the case is to be referred to the VP.

In each question below, detailed information of candidate is given. You have to carefully study the information provided in each case and take one of the following courses of actions based on the information and the conditions given above. You are not to assume anything other than the information provided in each question. All these case are given to you as on 01.12.2013. You have to indicate your decision by marking answers to each question as follows

#### Give answer

- (a) If the case is to be referred to VP
- (b) If the case is to be referred to GM
- (c) If the data provided is not sufficient to take a decision
- (d) If the candidate is to be selected
- (e) If the candidate is not to be selected
- 51. Ms.Suneeta is an IT Engineer with 60% marks at graduation as well as in selection test. She is working as a Software Engineer for last 3 years after completing engineering degree and has completed 27 years of age. She is willing to sign the bond of Rs.50000.
- 52. RakeshRao is a Computer Engineer graduate and thereafter is working as a Software Manager for last 6 years. He has secured 72% marks at graduation and 67% marks in selection test. His date of birth is 05.12.1984. He is not willing to sign the bond for Rs.50000.
- 53. Ram Kumar is an engineering graduate in computers with 78% marks passed out in 2007 at the age of 23 years. Since, then he is working as a Software Manager in an engineering firm. He doesn't want to sign the bond for Rs.50000. He has cleared the selection test with 72% marks.
- 54. Nishant is an Electronics Engineer passed out in June, 2010 at the age of 22 years. Since, then he is working as a programmer in a software company. He has passed the selection test with 66% marks and is willing to sign the bond.
- 55. Kalyani is an engineer with 72% marks in telecommunicator. She has just completed 27 years of age. She has cleared the selection test with 59% marks. She is willing to sign the bond.

Directions (Q. 56-60) Study the given information and answer the following questions. When a word and number arrangement machine is given an input line of words and numbers, it arranges them following a particular rule. The following is an illustration of input and rearrangement. (All the numbers are two digit numbers)

Input Step I	40 made butter 23 37 cookies salt extra 52 86 92 fell now 19 butter 19 40 made 23 37 cookies salt extra 52 86 92 fell now
Step II	cookies 23 butter 19 40 made 37 salt extra 52 85 92 fell now
Step III	extra 37 cookies 23 butter 19 40 made salt 52 86 92 fell now
Step IV	fell 40 extra 37 cookies 23 butter 19 made salt 52 86 92 now
Step V	made 52 fell 40 extra 37 cookies 23 butter 19 salt 86 92 now
Step VI	now 86 made 52 fell 40 extra 37 cookies 23 butter 19 salt 92
Step VII	salt 92 now 86 made 52 fell 40 extra 37 cookies 23 butter 19

Step VII is the last step of the above arrangement as the intended arrangement is obtained. As per the rules followed in the given steps, find out the appropriate steps for the given input.

## **Input** 32 proud girl beautiful 49 58 97 rich family 61 72 17 nice life

- 56. How many steps will be required to complete the given input?
  - a) Five
  - b) Six
  - c) Seven
  - d) Eight
  - e) Nine
- 57. Which of the following is 3<sup>rd</sup> element from the left end of step VI?
  - a) Beautiful
  - b) Life
  - c) 61
  - d) Nice
  - e) 17
- 58. Which of the following is Step III of the given input?
  - a) proud 72 girl 48 family 32 beautiful 17 55 97 rich 61
  - b) life 55 girl 48 family 32 beautiful 17 proud 97 rich 61 72 nice
  - c) girl 48 family 32 beautiful 17 proud 55 97 rich 61 72 nice life
  - d) family 32 beautiful 17 proud girl 48 55 97 rich 61 72 nice life
  - e) girl 49 life 55 family 32 beautiful 17 proud 97 rich 61 72 nice
- 59. What is the position of 'nice' from the left end in the final step?
  - a) 5<sup>th</sup>
  - b) 6<sup>th</sup>
  - c) 7<sup>th</sup>
  - d) 8<sup>th</sup>
  - e) 9<sup>th</sup>
- 60. Which element is 3<sup>rd</sup> to the right of 'family' in Step V?
  - a) Beautiful
  - b) 17
  - c) Proud
  - d) 97
  - e) 32

# Directions (Q. 61-65) Read the following information carefully and then answer the questions based on it.

A sales representative plans to visit each of six companies – M, N, P, Q, R and S exactly once during the course of one day. She is setting up her schedule for the day according to the following conditions.

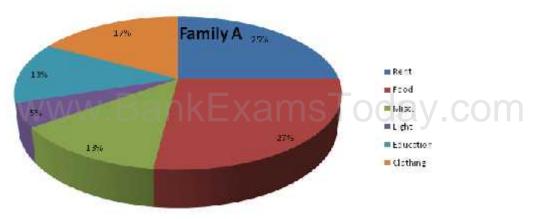


- I. She must visit M before N and before R.
- II. She must visit N before Q.
- III.  $3^{rd}$  company she visits must be P.
- 61. Which of the following could be the order in which sales representative visits the six companies?
  - a) M, R, N, Q, P, S
  - b) M, S, P, N, R, Q
  - c) P, R, M, N, Q, S
  - d) P, S, M, R, Q, N
  - e) None of these
- 62. Which of the following must be true of the sales representative's schedule for the day?
  - a) She visits M before Q
  - b) She visits N before R
  - c) She visits P before M
  - d) She visits P before R
  - e) None of these
- 63. If the sales representative visits S first, which company must she visit 2<sup>nd</sup>?
  - a) M
  - b) N
  - c) P
  - d) Q
  - e) None of these
- 64. Which of the following could be true of the sales representative's schedule?
  - a) She visits M 3<sup>rd</sup>
  - b) She visits R 6<sup>th</sup>
  - c) She visits P 1st
  - d) She visits Q 2<sup>nd</sup>
  - e) None of these
- 65. If the sales representative visits Q immediately before R and immediately after S, she must visit Q
  - a) 1<sup>st</sup>
  - b) 2<sup>nd</sup>
  - c) 4<sup>th</sup>
  - d) 5<sup>th</sup>
  - e) None of these

# **Quantitative Aptitude**

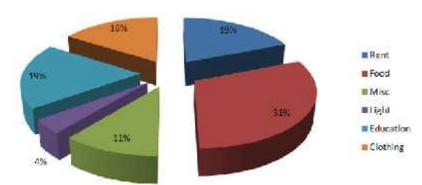
Directions (Q. 66-70): Refer to the following pie charts and solve the questions based on it.





Total Expenses = Rs. 48,000

## Family B



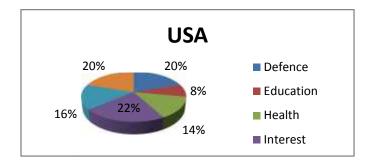
Total Expenses = Rs. 72,000

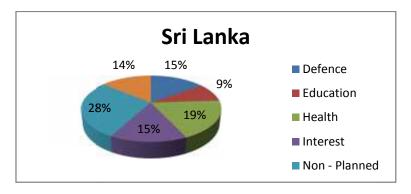
- 66. Both the families decide to double the total expenditure keeping the pattern of spending the same as given above. What will be the new ratio of expenditure on food between family A and family B?
  - a) 27:31
  - b) 31:27
  - c) 2:3
  - d) 3:2
  - e) None of The Above
- 67. If the total expenses of family B increases three fold, keeping the expenses on education the same as given above, what will be the expense on education?
  - a) 6.33%
  - b) 57%
  - c) 19%
  - d) 18%
  - e) None of The Above
- 68. What will be the expenses on light by family A, as a percentage of expense on light by family B?
  - a) 120%
  - b) 83.33%
  - c) 62.5%
  - d) 66.66%
  - e) None of The Above

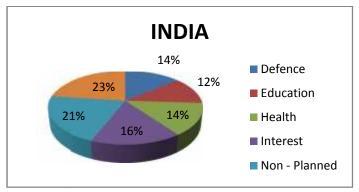
- 69. If family A and family B decide to combine their expenses, then which one of the following heads will be responsible for the highest expenses?
  - a) Rent
  - b) Miscellaneous
  - c) Food
  - d) Education
  - d) Education
    e) None of The Above
- 70. In the above question, how many heads will have a lower percentage share in the combined total expenses of both the families than the percentage share of family B under the same head?
  - a) 1
  - b) 2
  - c) 3
  - d) 4
  - e) None of The Above

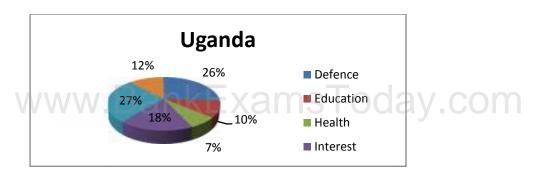
## Directions (Q. 71-75) Refer to the following pie charts and solve the questions based on it:

The following pie charts represent the budget expenditure of certain countries on various sectors for the year in 2007:









- 71. A country is said to be progressive if its education, health and infrastructure expenditure are in the top four expenditure sectors. How many of the four countries are progressive?
  - a) 0
  - b) 1
  - c) 2
  - d) 3
  - e) None of these
- 72. A country is said to be developing if its combined expenditure on education, health and infrastructure is at least 50% of the total expenditure. How many of the four countries are developing nations?
  - a) 0
  - b) 1
  - c) 2
  - d) 3
  - e) None of The Above
- 73. If a country is under military rule, it will spend maximum on defence and minimum on either health or education. How many of the above countries are under military rule?
  - a) 0
  - b) 1
  - c) 2
  - d) Can't be Determined
  - e) None of The Above
- 74. Which of the following sectors will have same ranking in the countries budget expenditures?
  - a) Non Planned
  - b) Education
  - c) Health
  - d) Can't be Determined
  - e) None of The Above
- 75. If the total budgetary expenditures of all the four countries are combined, which sector will account for the maximum expenditure?
  - a) None Planned
  - b) Interest
  - c) Defence
  - d) Can't be Determined
  - e) None of The Above
- 76. If a = 0.1039, then the value of  $\sqrt{4a^2 4a + 1} + 3a$  is
  - a) 0.1039
- b) 0.2078

c) 1.1039



- d) 2.1039
- e) None of these
- 77. Sri Krishna took the chariot and started his journey from Mathura to Gokul by his chariot at the speed of 40 km/hr and then, the same distance he travelled onn his foot at the speed of 10 km/hr from Gokul to Brindaban. Then he returned from Brindabann to Mathura via Gokul at the speed of 24 km/hr riding on the horse. The average speed of the whole trip is :
  - a) 20 km/hr
- b) 25 km/hr
- c) 19.2 km/hr

- d) 18.5 km/hr
- e) None of these
- 78. The smallest fraction, which each of  $\frac{6}{7}$ ,  $\frac{5}{14}$ ,  $\frac{10}{21}$  will divide exactly is:

- e) None of these
- 79. In a school, 10% of the boys are same in number as  $\frac{1}{4}$ th of the girls. What is the ratio of boys to girls in that school?
  - a) 3:2
- b) 5:2

c) 2 : 1

- d) 4:3
- e) None of these
- 80. A began a business with Rs. 85,000. He was joined afterwards by B with Rs. 42,500. For how much period does B join, if the profits at the end of the year are divided in the ratio of 3: 1?
  - a) 4 months
- b) 5 months
- c) 6 months

- d) 8 months
- e) None of these
- 81. The age of father 10 years ago was thrice the age of his son. Ten years hence, father's age ill be twice that of his son. The ratio of their present ages is:
  - a) 5:2
- b) 7:3

c)9:2

- d) 13:4
- e) None of these
- 82. Alfred buys an old scooter for Rs.4700 and spends Rs.800 on its repairs. If he sells the scooter for Rs.5800, his gain percent is:
  - a)  $4\frac{4}{7}\%$

c) 10%

- b)  $5\frac{5}{11}\%$ e) None of these
- 83. The sum to *n* terms of the series

a) 
$$\sqrt{2n+1}$$
 b)  $\frac{1}{\sqrt{1+\sqrt{3}}} + \frac{1}{\sqrt{3}+\sqrt{5}} + \frac{1}{\sqrt{5}+\sqrt{7}} + \dots$  Is:  
b)  $\frac{1}{2}\sqrt{2n+1}$  c)  $\sqrt{2n-1}$ 

- d)  $\frac{1}{2}\sqrt{2n+1}$  1
- e) None of these
- 84. A car covers a distance of 715 km at a constant speed. If the speed of the car would have been 10 km/hr more, then it would have taken 2 hours less to cover the same distance. What is the original speed of the car?
  - a) 45 km/hr
- b) 50 km/hr

c) 55 km/hr

- d) 65 km/hr
- e) None of these
- 85. A tyre has two punctures. The first puncture alone would have made the tyre flat in 9 minutes and the second alone would have done it in 6 minutes. If air leaks out at a constant rate, how long does it take both the punctures together to make it flat?
- b)  $3\frac{1}{2}$

- e) None of these



86.	A is 30% more efficient than B. How much time will they, working together, take to complet						
	a job which A alone could have done in 23 days?						
	a) 11 days	b) 13 days	c) $20\frac{3}{17}$				
	d) Data inadequate	e) None of these	***				
87.	. A man can row 5 km/h in still water. If the rate of current is 1 km/h, it takes $\frac{5}{4}$ hours to roto a place and back. How far is the place?						
	a) 2 km d) 4 km	b) 2.5 km e) None of these	c) 3 km				
88.		b) Monday	e day of the week on 08 <sup>th</sup> Feb. 2004? c) Sunday				
89.	How much does a watch	h lose per day if its ha	nds coincide every 64 minutes?				
07.	a) $32 \frac{8}{min}$	h) $36\frac{5}{100}$ min	c) 90 min.				
	<ul> <li>a) 32 <sup>8</sup>/<sub>11</sub>min.</li> <li>d) 96 min.</li> </ul>	e) None of these	c) 70 mm.				
	<b>a</b> ) > 0 mm.	c) I tolle of these					
90.	. How many litres of water should be added to a 30 litre mixture of milk and water containing milk and water in the ratio of 7:3 such that the resultant mixture has 40% water in it?  a) 7 litres b) 10 litres c) 5 litres d) Data inadequate e) None of these						
				_			
91.	_		5 and 20 hours respectively. If A is open all that the same of the	ne			
	a) 6hrs	b) 6 2/3 hrs	c) 7 hrs				
	d) 7 1/2 hrs	e) None of these	<b>c</b> ) / IIIs				
0.2	A CD 1000	200::		.07			
92.			ypes of shares. The first yields an interest of 90				
			erest at the end of one year is $9\frac{3}{4}\%$ , then the	ne			
	amount invested in each share was : a) Rs.52,500, Rs.47,500 b) Rs.62,500, Rs.37,500						
	c) Rs.72,500, Rs.27,500		.82,500, Rs.17.500				
	e) None of these						
93.	<ul> <li>O3. An automobile financier claims to be lending money at simple interest, but he includes the interest every six months for calculating the principal. If he is charging an interest of 10%, effective rate of interest becomes:</li> <li>a) 10%</li> <li>b) 10.25%</li> <li>c) 10.5%</li> </ul>						
	d) Data inadequate	e) None of these	,				
94	The price of a car is R	s 3 25 000. It was insi	ared to 85% of its price. The car was damage	ed			
77.	completely in an accide the difference between a) Rs.32,500	ent and the insurance of the price of the car and b) Rs.48,750	company paid 90% of the insurance. What wa				
	d) Rs.81,250	e) None of these					
95.	If 20% of $a = b$ , then by	% of 20 is the same as:					
	a) 4% of a	b) 5% of a	c) 20% of a				
	d) Data inadequate	e) None of these					

96.	A sphere of 30	cm radius is	dropped into	a cylindrical	vessel	of 80 cm	j diameter,	which is
	partly filled wik	cth water, then	its level rise	s by x cm. Fin	ıd x:			

- a) 27.5 cm
- b) 22.5 cm

c) 18.5 cm

- d) Data inadequate
- e) None of these
- 97. A shopkeeper expects a gain of  $22 \frac{1}{2}$  % on his cost price. If in a week, his sale was of Rs.392, what was his profit?
  - a) Rs.18.20
- b) Rs.70

c) Rs.72

- d) Rs.88.25
- e) None of these
- 98. Find the area of right angled triangle whose base is 12 cm and hypotenuse 13 cm.
  - a)  $30 cm^2$
- b)  $60 cm^2$

c)  $70 cm^2$ 

- d)  $80 cm^2$
- e) None of these
- 99. A, B and C together earn Rs.300 per day, while A and C together earn Rs.188 and B and C together earn Rs.152. The daily earning of C is:
  - a) Rs.40
- b) Rs.68

c) Rs.112

- d) Rs.150
- e) None of these
- 100. In a 100 m race, A beats B by 10 m and C by 13 m. In a race of 180 m, B will beat C by:
  - a) 5.4 m
- b) 4.5 m

c) 5 m

- d) 6 m
- e) None of these

# **Answers:**

- 1. Option D
- 2. Option C
- 3. Option B
- 4. Option A
- 5. Option D
- 6. Option D
- 7. Option D
- 8. Option C
- 9. Option D
- 10. Option C
- 11. Option A
- 12. Option B
- 13. Option C
- 14. Option A
- 15. Option D16. Option B
- 17. Option D
- 17. Option D
- 18. Option A
- 19. Option B 20. Option D
- 21. Option C
- 21. Option C
- 22. Option D 23. Option A
- 24. Option A
- 25. Option A
- 26. Option C
- 27. Option D



- 28. Option C
- 29. Option B
- 30. Option D
- 31. Option D
- 32. Option B

Statement I is not sufficient because the number of pages in the book is not given.

Statement II is sufficient because in 2 h half of the book is read.

$$1 \text{ book} = 2 \times 2 = 4 \text{ h} < 6 \text{ h}$$

#### 33. Option A

A bag has 5 grape fruits at a time and there are 8 such bags in a case.

Total number of grape fruits in a case =  $5 \times 8 = 40$ 

Statement I alone is sufficient to answer the question but Statement II alone is not sufficient.

#### 34. Option D

For batting average total score of the batsman should be known. So, neither Statement I nor Statement II is sufficient.

### 35. Option C

From Statement II, Let the price of cork be Rs.x.

Then, price of bottle = Rs.x (x + 75)

Now, from Statement I, combined price bottle and cork = Rs.95

$$x + (x + 75) = 95$$

(from Statements I and II)

$$2x + 75 = 95$$

$$2x = 20, x = 10$$

So, both Statements are necessary to answer the question.

- 36. Option B
- 37. Option B
- 38. Option E
- 39. Option D
- 40. Option D
- 41. Option B

H % J means H < J .....(i)

 $J \otimes N$  means J = N .....(ii)

$$N @ R = N > R$$
 .....(iii)

On combining the statements (i), (ii) and (iii) we get

$$H < J = N > R$$

#### **Conclusions**

- I. R % J means R < J (True)
- II. H @ J means H > J (False)
- III. N @ H means N > H (True)

So, it is clear that both Conclusions I and III are true.

## 42. Option D

 $M @ J means M > J \dots(i)$ 

 $J \ \ T \ means \ J > T$  .....(ii)

 $T \odot N \text{ means } T = N$  .....(iii)

On combining the statements (i), (ii) and (iii) we get

 $M>J \quad \ T=N$ 

#### **Conclusions**

- I. N # J means N J (True)
- II. T % M means T < M (True)



III. M @ N means M > N (True)So, it is clear that all the Conclusions I, II and III are true

43. Option C

 $D \otimes K$  means D = K....(i)

K # F means K F ..... (ii)

F @ P means F > P.....(iii)

ExamsToday.com On combining the statements (i), (ii) and (iii), we get

 $D = K \quad F > P$ 

Conclusions

- I. P @ D means P > D (False)
- K # P means K P (False) II.
- F \$ D means F D (True)

So, it is clear that only Conclusion III is true.

44. Option B

R # D means R D .....(i)

D \$ M means D M .....(ii)

 $M \odot N \text{ means } M = N$ .....(iii)

On combining the statements (i), (ii) and (iii), we get

R D M = N

Conclusions

- R # M means R M (False) I.
- II. N # D means N D (True)
- N \$ R means N R (False) III.

So, it is clear that only Conclusion II is true

45. Option D

 $K \odot P$  means K = P.....(i)

P @ Q means P > Q....(ii)

Q \$ R means Q R .....(iii)

On combining the statements (i), (ii) and (iii), we get

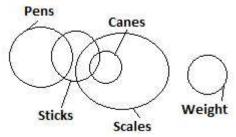
K = P > Q R

Conclusions

- I. K @ R means K > R (True)
- II. R % P means R < P (True)
- III. Q % K means Q < K (True)

So, it is clear that all the conclusions I, II and III are true

46. Option B



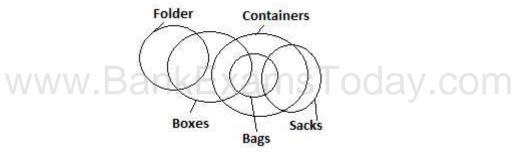
**Conclusions:** 

I. Some sticks are scales. (True)

II. No stick is scale. (False)

III. No cane is weight. (True)

## 47. Option B



**Conclusions:** I. No folder is bag. (False)

II. Some boxes are containers. (True) III. Some sacks are containers. (True)

## 48. Option D

Some insects are pests. (I-type)
All pests are birds. (A-type)
No bird is amphibian. (E-type)
All amphibians are animals. (A-type)

From statements 3 and 4, E + A = or type conclusion

Some animals are not birds.

So, conclusion I does not follow.

From statements 1 and 2, I + A = I-type question

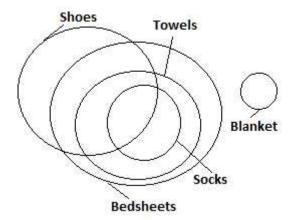
Some insects are birds = Conclusion II

From statements 2 and 3, A + E = E-type question

No pests are amphibians – Conclusion III

Hence, conclusion II and III follow

## 49. Option D

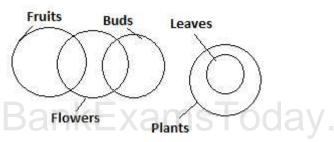


**Conclusions:** I. No towel is blanket. (True)

II. Some shoes are towels. (True)

III. Some shoes are bedsheets. (True)

## 50. Option A



**Conclusions:** 

- I. No plant is bud. (False)
- II. Some plants are flowers. (False)
- III. Some buds are fruits. (False)

Candidates	I	П	III	IV	V	(a)	(b)
Suneeta	True	True	True	True	True		
Rakesh	True	True	True		True		True
Ram	True	True	True		True		True
Kumar							
Nishant		True	True	True	True		
Kalyani	False	?	True	True	True		

- 51. Option D
- 52. Option A
- 53. Option A
- 54. Option C
- 55. Option E
- 56. Option C
- 57. Option D
- 58. Option C
- 59. Option A
- 60. Option B
- 61. Option B

P must be in 3<sup>rd</sup> place and the order M, N and Q must not be violated. Hence, the only valid order = M, S, P, N, R, Q

#### 62. Option A

It is very much obvious that she visits M before N and N before Q. So, she must visit M before Q.

## 63. Option A

Of the six companies, if S is 1<sup>st</sup>, P is 3<sup>rd</sup> and the order MNQ and MR are followed, then M must be visited 2<sup>nd</sup>.

- 64. Option B
- 65. Option D

If Q is visited just before R and immediately after S, the order followed will be M, N, S, Q, R. Since, P must be in 3<sup>rd</sup> place, so we have M, N, P, S, Q, R i.e. Q will be visited 5<sup>th</sup>

#### 66. Option A

If the percentage increase in the expenditure of both the families, is the same then the ratio will be the same.

67. Option A

The total consumption has become 3 times more keeping the expenses on education the same. Hence, the percentage consumption on education will become 1/3rd of the person

- 68. Option B
- 69. Option C

By visual inspection we can see that option C is the correct answer

70. Option B

It should be understood that the final percentage of expenditure will always be in between the percentage of family A and family B (it is true of any mixture that the percentage composition of the mixture will be always in between the percentage compositions of the components).

71. Option A

By visual inspection we can see that option A is the correct answer.

72. Option A

By visual inspection we can see that option A is the correct answer

73. Option D

Understand the logic that "If a country is under military rule, it will spend maximum on defence and minimum on either health or education" does not mean that if a country is spending maximum on defence and minimum on either health or education, then it will under military rule.

74. Option D

By visual inspection, we can see that option D is the correct answer

Since Individual expenditures of the countries are not given, we can't determine it

76. Option C

$$\sqrt{4a^2} \quad 4a + 1 + 3a = \overline{(1)^2 + (2a)^2 + 2 \times 1 \times 2a + 3a} 
= \overline{(1 \quad 2a)^2 + 3a} 
= (1 \quad 2a) + 3a 
= (1 + a) 
= (1 + 0.1039) 
= 1.1039$$

77. Option C

Since the distance from Mathura to Gokul is same as that of Gokul to Brindaban. So, the average speed from Mathura to Brindaban =  $\frac{2 \times 40 \times 10}{(40 + 10)} = 16 \text{ km/hr}$ 

Again since he returned on the same path, so the distance from Mathura to Brindaban is same in both the directions.

Thus, the required average speed =  $\frac{2 \times 16 \times 24}{(16 + 24)}$  = 19.2 km/hr

78. Option A

Required fraction = LCM of  $\frac{6}{7}$ ,  $\frac{5}{14}$ ,  $\frac{10}{21} = \frac{LCM \text{ of } 6.5.10}{HCF \text{ of } 7.14.21} = \frac{30}{7}$ 

79. Option B

10% of B = 
$$\frac{1}{4}$$
G  
 $\frac{10B}{100} = \frac{1}{4}$ G

$$B = \frac{5}{2}G$$
So, 
$$\frac{B}{G} = \frac{5}{2}$$

$$B: G = 5: 2$$

80. Option D

Suppose B joined for x months. Then, Then,  $\begin{bmatrix} \frac{85000 \times 12}{42500 \times x} \end{bmatrix} = \frac{3}{1}$ 

$$x = \left[\frac{85000 \times 12}{42500 \times 3}\right] = 8$$

- 81. So, B joined for 8 months
- 81. Option B

Let the ages of father and son 10 years ago be 3x and x years respectively.

Then, 
$$(3x + 10) + 10 = 2[(x + 10) + 10]$$
  
 $3x + 20 = 2x + 40$   
 $x = 20$ 

So, required ratio = (3x + 10): (x + 10) = 70: 30 = 7: 3

82. Option B

C.P. = Rs. 
$$(4700 + 800) = \text{Rs.}5500$$
; S.P. = Rs.5800  
Gain % =  $\left[\frac{300}{5500} \times 100\right]$  % =  $5\frac{5}{11}$ %

83. Option D
$$S_n = \frac{1}{\sqrt{1} + \sqrt{3}} + \frac{1}{\sqrt{3} + \sqrt{5}} + \dots + \frac{1}{\sqrt{2n-1} + \sqrt{2n+1}}$$

$$= \frac{1}{2} [(\sqrt{3} \sqrt{1}) + (\sqrt{5} \sqrt{3}) + (\sqrt{7} \sqrt{5}) + (\sqrt{2n+1} - 2n - 1)]$$

$$= \frac{1}{2} (\sqrt{2n+1} - 1)$$

84. Option C

Let the original speed be x km/hr. Then,

$$\frac{715}{x} \frac{715}{x+10} = 2 \ 2x \ (x+10) = 7150 \qquad x^2 + 10x \quad 3575 = 0$$
$$(x+65) \ (x \quad 55) = 0 \qquad x = 55 \ \text{km/hr}$$

85. Option C

1 minute's work of both the punctures =  $\left[\frac{1}{9} + \frac{1}{6}\right] = \frac{5}{18}$ So, both the punctures will make the tyre flat in  $\frac{18}{5} = 3\frac{3}{5}$  min.

86. Option B

Ratio of times taken by A and B = 100 : 130 = 10 : 13

Suppose B takes x days to do the work.

Then, 10: 13:: 23: x 
$$x = [\frac{23 \times 13}{10}]$$
  $x = \frac{299}{10}$   
A's 1 day's work  $= \frac{1}{23}$   
B's 1 day's work  $= \frac{10}{299}$   
 $(A + B)$ 's 1 day's work  $= [\frac{1}{23} + \frac{10}{299}] = \frac{23}{299} = \frac{1}{13}$ 

Therefore, A and B together can complete the work in 13 days

## 87. Option C

Let the required distance be D km, then  $\frac{D}{5} + \frac{D}{4} = \frac{5}{4}$ 

$$\frac{D}{6} + \frac{D}{4} = \frac{5}{4}$$

$$D\left[\frac{10}{24}\right] = \frac{5}{4}$$
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## 88. Option C

The year 2004 is a leap year. It has 2 odd days.

So, the day on 8<sup>th</sup> Feb. 2004 is 2 days before the day on 8<sup>th</sup> Feb. 2005 Hence, this day is Sunday.

## 89. Option A

55 min. spaces are covered in 60 min.

60 min. spaces are covered in 
$$\left[\frac{60}{55} \times 60\right]$$
 min. =  $65\frac{5}{11}$  min.

Loss in 64 min. = 
$$[66\frac{5}{11} \quad 64] = \frac{16}{11}$$
 min

Loss in 64 min. = 
$$[66\frac{5}{11} \quad 64] = \frac{16}{11} \text{ min.}$$
  
Loss in 24 hours =  $[\frac{16}{11} \times \frac{1}{64} \times 24 \times 60] \text{ min.} = 32\frac{8}{11} \text{ min.}$ 

## 90. Option C

30 litres of the mixture has milk and water in the ratio 7:3 i.e. the solution has 21 litres of milk and 9 litres of water.

When you add more water, the amount of milk in the mixture remains constant at 21 litres. In the first case, before addition of further water 21 litres of milk account for 70% by volume. After water is added, the new mixture contains 60% milk and 40% water.

Therefore, the 21 litres of milk account for 60% by volume.

Hence, 100% volume = 
$$\frac{21}{0.6}$$
 = 351 litres

We started with 30 litres and ended up with 35 litres. Therefore, 5 litres of water was added.

#### 91. Option C

Option C
$$(A + B)'s 1 \text{ hour work} = \left[\frac{1}{12} + \frac{1}{15}\right] = \frac{9}{60} = \frac{3}{20}$$

$$(A + C)'s 1 \text{ hour work} = \left[\frac{1}{12} + \frac{1}{20}\right] = \frac{8}{60} = \frac{2}{15}$$
Part filled in 2 hours = 
$$\left[\frac{3}{20} + \frac{2}{15}\right] = \frac{17}{60}$$
Part filled in 6 hours = 
$$\left[3 \times \frac{17}{60}\right] = \frac{17}{20}$$
Remaining part = 
$$\left[1 \quad \frac{17}{20}\right] = \frac{3}{20}$$

Now, it is the turn of A and B and  $\frac{3}{20}$  part is filled by A and B in 1 hour.

So, total time taken to fill the tank = (6 + 1) = 7 hours

#### 92. Option B

Let the sum invested at 9% be Rs. x and that invested at 11% be Rs. (100000 x)

sum invested at 9% be Rs. x and that invested at 11% be Rs. (100000 Then, 
$$\left[\frac{x \times 9 \times 1}{100}\right] + \frac{\left[(100000 \times) \times 11 \times 1\right]}{100} = \left[100000 \times \frac{39}{4} \times \frac{1}{100}\right]$$

$$\frac{9x + 1100000}{100} \frac{11x}{4} = \frac{39000}{4} = 9750$$

$$2x = (1100000 975000) = 125000$$

$$x = 62500$$
Sum invested at 9% - Rs 62500

Sum invested at 9% = Rs.62500

Sum invested at 11% = Rs. (100000 - 62500) = Rs. 37500

### 93. Option B

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Let the sum be Rs.100. Then,

S.I. for first 6 months = Rs. 
$$\left[\frac{100 \times 10 \times 1}{100 \times 2}\right]$$
 = Rs.5  
S.I. for last 6 months = Rs.  $\left[\frac{105 \times 10 \times 1}{100 \times 2}\right]$  = Rs.5.25

So, amount at the end of 1 year = Rs. (100 + 5 + 5.25) = Rs.110.25 So, effective rate =  $(110.25 \quad 100)$  = 10.25%

94. Option C

Amount paid to car owner = 90% of 85% of Rs.3,25,000  $= \text{Rs.} (\frac{90}{100} \times \frac{85}{100} \times 325000)$  = Rs. 2,48,625 Required difference = Rs. (325000 248625) = Rs. 76,375

95. Option A

20% of 
$$a = b$$

$$\frac{20}{100} a = b$$
So, b% of  $20 = \left[\frac{b}{100} \times 20\right] = \left[\frac{20}{100} a \times \frac{1}{100} \times 20\right] = \frac{4}{100} a = 4\%$  of a

96. Option B

Volume of water displaced = volume of sphere

$$\times (40)^2 \times h = \frac{4}{3} \times (30)^3$$
  
h =  $\frac{90}{4}$  = 22.5 cm

Thus, the level of water rises by 22.5 cm.

**Note** The volume of water will be calculated by considering it in the cylindrical shape since the water takes the shape of vessel in which it is filled.

97. Option C

Option C

C.P. = 
$$Rs.[\frac{100}{122.50} \times 392]$$
=  $Rs.[\frac{1000}{122.5} \times 392]$ 
=  $Rs.320$ 

Therefore, profit =  $Rs.(392 \ 320)$ 
=  $Rs.72$ 

98. Option A

Height of the triangle = 
$$\sqrt{13^2}$$
  $12^2$  cm =  $\sqrt{25}$  cm = 5 cm.  
So, its area =  $\frac{1}{2}$  × Base × Height =  $[\frac{1}{2}$  × 12 × 5] cm<sup>2</sup> = 30 cm<sup>2</sup>

99. Option A

100. Option D

A: B = 100: 90 and A: C = 100: 87  

$$\frac{B}{C} = \frac{B}{A} \times \frac{A}{C} = \frac{90}{100} \times \frac{100}{87} = \frac{30}{29}$$
  
When B runs 30 m, C runs 29 m  
When B runs 180 m, C runs [ $\frac{29}{30} \times 180$ ] m = 174 m  
So, B beats C by (180 174) m = 6 m

