

# General Paper-I

## Model Solved Paper

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**Time : 1 hours**

**Maximum Marks : 100**

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**Note : This paper contains fifty (50) objective type questions, each question carries two (2) marks. Attempt all the questions.**

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1. To make learning effective, a goal must be meaningful in terms \_\_\_\_\_ ?  
(A) Objectives of the curriculum                      (B) Intellectual ideas  
(C) Standards of others                                      (D) The needs and purposes of students
  
2. Which of the following items of information are important about students to motivate them for studies ?  
(A) Learning style    (B) Personality  
(C) Socio-cultural background                              (D) All of the above
  
3. The \_\_\_\_\_ amendment got "Fundamental Duties" added to the Constitution of India ?  
(A) 42nd Amendment                                      (B) 54th Amendment  
(C) 83rd Amendment                                      (D) 93rd Amendment
  
4. Which of the following situations would the best for maximum transfer of learning ?  
(A) Different tasks requiring different responses  
(B) Different tasks requiring the same response  
(C) Similar tasks requiring different responses  
(D) Similar tasks requiring the same response
  
5. Which one of the following is the most important elements in teaching ?  
(A) Relationship between teachers and students  
(B) Subject matter  
(C) Teaching techniques and aids used  
(D) Student's knowledge
  
6. Field Study is related to  
(A) Real life situations                                      (B) Experimental Situations  
(C) Laboratory Situations                                      (D) None of the above
  
7. A researcher wants to study the relationship of family size to income. He classifies his population into different income slabs and then takes a random sample from each slab in order. Which technique of sampling is he working with ?  
(A) Cluster sampling                                      (B) Random sampling  
(C) Stratified random sampling                              (D) Systematic sampling

8. In the purposive method of sampling design, items are selected according to \_\_\_\_\_
- (A) Law of certainty (B) Law of probability  
(C) Personal judgment (D) None of the above
9. 'Ethnography' describes \_\_\_\_\_
- (A) Culture (B) Way of life  
(C) Progeny (D) Both (A) and (B)
10. \_\_\_\_\_ is attributing our own thoughts and feeling to others.
- (A) Stereotyping (B) Halo effect  
(C) Projection (D) All of the above
11. Match the following categories of barriers with their classification
- |                                |                       |
|--------------------------------|-----------------------|
| 1. Sender-related barrier      | A. Non-verbal signals |
| 2. Situation-related barriers  | B. Noise              |
| 3. Receiver - related barriers | C. Perceptions        |
- (A) 1-A, 2-B, 3-C (B) 1-B, 2-A, 3-C  
(C) 1-A, 2-C, 3-B (D) None of these
12. Which of the following is a barrier to effective listening ?
- (A) Setting communication goals (B) Using correct amount of redundancy  
(C) Partial listening and distractions (D) Improving communicator's credibility
13. What is lateral communication ?
- (A) Communication flows from superiors to subordinates  
(B) Communication flows between manager and members of other work-groups  
(C) Communication flows between peers  
(D) None of the above
14. Prasar Bharati is a
- (A) Television Channel  
(B) News Paper  
(C) Autonomous Broadcasting Corporation  
(D) Magazine
15. Full Form of UNI is
- (A) United Nation Information (B) United News of India  
(C) Union News India (D) All of these
16. Which of the following sources of data is not based on primary data collection?
- (A) Census of India (B) National Sample Survey  
(C) Statistical Abstracts of India (D) National Family Health Survey

17. Look at this series : 664, 332, 340, 170, \_\_\_\_\_, 89 What number should fill like the blanks ?
- (A) 85 (B) 97  
(C) 109 (D) 178

18. Three of the following four are like in a certain way and so form a group. Which is the one that does not belong to that group ?
- (A) Jowar (B) Wheat  
(C) Paddy (D) Mustard

19. **Statement** : Can pollution be controlled ?

**Argument** :

- I. Yes, if everyone realizes the hazard it may create and co-operation to get rid of it. Pollution may be controlled.
- II. No, the crowd highways, factories and industries and an ever growing population eager to acquire more and more land for constructing houses beyond control.

- (A) If only argument I is strong.  
(B) If only argument II is strong.  
(C) If either I or II is strong.  
(D) If neither I nor II is strong.

20. Village Q is to the North of the village P. The village R is in the East of Village Q. The village S is to the left of the village P. In which direction is the village S with respect to village R ?
- (A) West (B) South-West  
(C) South (D) North-West

21. AZBY : CXDW :: EVFU : ?

- (A) GTHS (B) GHTS  
(C) GSTH (D) TGSH

22. 

- (a)  (b) 
- (c)  (d) 

Which of the following figures best depicts the relationship among criminals, thieves and judges?

- (A) a (B) b  
(C) c (D) d

23. **Assertion (A)** : Should adult education programed be given priority over compulsory education programme ?

**Reason (R)** : I. No. It will also help in success of compulsory education programed.

II. Yes. It will help to eliminate the adult illiteracy.

- (A) Only argument I is strong. (B) Only Argument II is strong.  
 (C) Either I or II strong. (D) Neither I nor II is strong.

24. Pointing to an old man Kailash's said, "His son is my Son's Uncle" How is the old man related to Kailash's ?

- (A) Brother (B) Uncle  
 (C) Father (D) Grandfather

25. **Statement** : All the harmoniums are instruments. All the instruments are flutes.

**Conclusion** : I. All Flutes are Instrumental

II. All the harmoniums are flutes.

- (A) Only I Conclusions follows. (B) Only II Conclusions follows.  
 (C) Either I or II follows. (D) Neither I nor II follows.

**Direction (Q. 26-30)** : Read the following passage carefully and answer question numbers :

A remarkable aspect of art of the present century is the range of concepts and ideologies which it embodies. It is almost tempting to see a pattern emerging within the art field - or alternatively imposed upon it a posteriori similar to that which exists under the umbrella of science where the general term covers a whole range of separate, though interconnecting, activities. Any parallelism is however - in this instance at least misleading. A scientific discipline develops systematically once its bare tenets have been established, named and categorized as conventions. Many of the concepts of modern art, by contrast, have resulted from the almost accidental meetings of groups of talented individuals at certain times and certain places. The ideas generated by these chance meetings had twofold consequences. Firstly, a corpus of work would be produced which, in great part, remains as a concrete record of the events. Secondly, the ideas would themselves be disseminated through many different channels of communication - seeds that often bore fruit in contexts far removed from their generation.

Not all movements were exclusively concerned with innovation. Surrealism, for instance, claimed to embody a kind of insight which can be present in the art of any period. This claim has been generally accepted so that a sixteenth century painting by Springer or a mysterious photograph by At get can legitimately be discussed in surrealist terms. Briefly, then, the concepts of modern art are of many different (often fundamentally different) kinds and resulted from the exposures of painters, sculptors and thinkers to the more complex phenomena of the twentieth century, including our ever increasing knowledge of the thought and products of earlier centuries. Different groups of artists would collaborate in trying to make sense of a rapidly changing world of visual and spiritual experience. We should hardly be surprised if no one group succeeded completely, but achievements, though relative, have been considerable. Landmarks have been established - concrete statements of position which give a pattern to a situation which could easily have degenerated into total chaos. Beyond this, new language tools have been created for those who follow - semantic systems which can provide a springboard for further explorations. The codifying of art is often criticized. Certainly one can understand that artists are wary of being pigeonholed since they are apt to think of themselves as individuals - sometimes with good reason. The notion of self-expression, however, no longer carries quite the weight it once did; objectivity has its defenders. There is good reason to accept the ideas codified by artists and critics, over the

past sixty years or so, as having attained the status of independent existence - an independence which is not without its own value. The time factor is important here. As an art movement slips into temporal perspective, it ceases to be a living organism - becoming, rather, a fossil.

This is not to say that it becomes useless or uninteresting. Just as a scientist can reconstruct the life of a prehistoric environment from the messages codified into the structure of a fossil, so can an artist decipher whole webs of intellectual and creative possibility from the recorded structure of a 'dead' art movement. The artist can match the creative patterns crystallized into this structure against the potentials and possibilities of his own time. As T.S. Eliot observed, no one starts anything from scratch; however consciously you may try to live in the present, you are still involved with a nexus of behavior patterns bequeathed from the past. The original and creative person is not someone who ignores these patterns, but someone who is able to translate and develop them so that they conform more exactly to his - and our - present needs.

26. Many of the concepts of modern art have been the product of
- (A) Ideas generated from planned deliberations between artists, painters and thinkers.
  - (B) The dissemination of ideas through the state and its organizations.
  - (C) Accidental interactions among people blessed with creative muse.
  - (D) Patronage by the rich and powerful that supported art.
27. In the passage, the word 'fossil' can be interpreted as
- (A) An art movement that has ceased to remain interesting or useful.
  - (B) An analogy from the physical world to indicate a historic art movement.
  - (C) An analogy from the physical world to indicate the barrenness of artistic creations in the past.
  - (D) An analogy from the physical world to indicate the passing of an era associated with an art movement.
28. In the passage, which of the following similarities between science and art may lead to erroneous conclusions ?
- (A) Both, in general, include a gamut of distinct but interconnecting activities.
  - (B) Both have movements not necessarily concerned with innovation.
  - (C) Both depend on collaborations between talented individuals.
  - (D) Both involve abstract thought and dissemination of ideas.
29. The range of concepts and ideologies embodied in the art of the twentieth century is explained by
- (A) The existence of movements such as surrealism.
  - (B) Landmarks which give a pattern to the art history of the twentieth century.
  - (C) New language tools which can be used for further explorations into new areas.
  - (D) The fast changing world of perceptual and transcendental understanding.
30. The passage uses an observation by T.S. Eliot to imply that
- (A) Creative processes are not 'original' because they always borrow from the past.
  - (B) We always carry forward the legacy of the past.
  - (C) Past behaviors and thought processes recreate themselves in the present and get labeled as 'original' or 'creative'.
  - (D) 'Innovations' and 'original thinking' interpret and develop on past thoughts to suit contemporary needs.

31. Which of the following statements is correct ?  
(A) Virus is a part of software  
(B) Virus is an operating System.  
(C) Internet does not allow the virus to spread.  
(D) Virus improves the speed of processing information through computer
32. Transfer of data from one application to another line is known as :  
(A) Dodgy Data Exchange (B) Dynamic Data Exchange  
(C) Dynamic Disk Exchange (D) Dogmatic Data Exchange
33. Errors in Computer Program are called :  
(A) Bug (B) Spam  
(C) Follies (D) Mistakes
34. Information a combination of Graphics, Text, Sound, Video and Animation is called :  
(A) Multitask (B) Multimedia  
(C) Multiprocessing (D) Multiprogramming
35. Which of the following is the appropriate definition of a computer ?  
(A) Computer is a machine that can process information.  
(B) Computer is an electronic device that can store, retrieve and quickly process only quantitative data.  
(C) Computer is a machine that can store, retrieve and process quickly and accurately only qualitative information.  
(D) Computer is an electronic device that can store, retrieve and process both qualitative and quantitative data quickly and accurately.
36. Ministry of Human Resource Development (HRD) includes :  
(A) Department of Elementary Education and Literacy  
(B) Department of Secondary Education and Higher Education  
(C) Department of Women and Child Development  
(D) All the above
37. Who among the following can be asked to make a statement in Indian Parliament ?  
(A) Any MLA (B) Chief of Army Staff  
(C) Solicitor General of India (D) Mayor of Delhi
38. I.A.S.Es in teacher education were started in  
(A) 1964 (B) 1968  
(C) 1986 (D) 1992
39. International Institute of Educational Planning is at  
(A) London (B) Paris  
(C) New York (D) New Delhi

40. Which is the following agency regulates and monitors special education programed in India ?  
 (A) Ministry of Social Justice and Empowerment  
 (B) Ministry of Human Resource and Development  
 (C) Rehabilitation Council of India  
 (D) National Council of Teacher Education
41. Upper part of sea/aquatic ecosystem contains  
 (A) Plankton (B) nekton  
 (C) Plankton and nekton (D) benthos
42. Which one of the following is not a bio indicator of water pollution ?  
 (A) blood-worms (B) stone flies  
 (C) Sewage fungus (D) sludge-worms
43. Competition for light, nutrients and space is most severe between  
 (A) Closely related organism growing in different niches  
 (B) Closely related organisms growing in the same area/niche  
 (C) Distantly related organisms growing in the same habitat  
 (D) Distantly related organisms growing in different niches
44. In a coal fired power plant electrostatic precipitators are installed to control emission of  
 (A) NO<sub>x</sub> (B) SPM  
 (C) CO (D) SO<sub>2</sub>
45. Geometric representation of age structure is a characteristic of  
 (A) Population (B) Landscape  
 (C) Ecosystem (D) biotic community.

**Direction (46-50) :** The following table shows the number of new employees added to different categories of employees in a company and also the number of employees from these categories who left the company every year since the foundation of the Company in 2010

Year	Managers		Technicians		Operators		Accountants		Peons	
	New	Left	New	Left	New	Left	New	Left	New	Left
2010	760	-	1200	-	880	-	1160	-	820	-
2011	280	120	272	120	256	104	200	100	184	96
2012	179	92	240	128	240	120	224	104	152	88
2013	148	88	236	96	208	100	248	96	196	80
2014	160	72	256	100	192	112	272	88	224	120
2015	193	96	288	112	248	144	260	92	200	104

46. What is the difference between the total number of technicians added to the company and the total number of accountants added to the company during the years 2011 to 2015 ?
- (A) 128 (B) 112  
(C) 96 (D) 88
47. What was the total number of Peons working in the company in the year 2014 ?
- (A) 1312 (B) 1192  
(C) 1088 (D) 968
48. For which of the following categories the percentage increase in the number of employees working in the company from 2010 to 2015 was the maximum ?
- (A) Managers (B) Technicians  
(C) Operators (D) Accountant
49. What is the pooled average of the total number of employees of all categories in the year 2012
- (A) 1325 (B) 1195  
(C) 265 (D) 1235
50. During the period between 2010 and 2015, the total number of operators who left the company is what percent of total number of operators who joined the company ?
- (A) 19% (B) 21%  
(C) 27% (D) 29%

### ANSWER KEYS

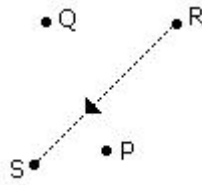
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
D	D	A	B	A	A	C	C	D	D
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
A	C	C	C	A	C	D	D	C	B
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
A	B	B	C	B	C	D	A	D	D
<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
A	B	A	B	D	D	C	D	B	C
<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>
A	B	B	B	A	D	B	A	B	D



## SOLUTIONS

1. (D) Students' needs and purposes Teacher creates learning environments where students are active participants as individuals and as members of collaborative groups.
2. (D) All of the above  
Learning styles in education are the systematic differences in individuals' natural or habitual pattern of acquiring and processing information in learning situations. Openness, carefulness, agreeableness are some of the personality traits.
3. (A) 42nd Amendment  
The "Fundamental Duties" were added by the 42nd Amendment in 1976.
4. (B) Different tasks that require the same response  
The behavioral approach to transfer is based upon the issue of similarities and differences in learning and the transfer situation.
5. (A) Relationship between teachers and students  
Improving students' relationships with teachers has important, positive and long-lasting implications for students' academic and social development.
6. (A) It's a study which systematically discovers relations and interactions among variables in real life situations
7. (C) Stratified random sampling in stratified random sampling technique, the population is divided into small groups.
8. (C) Personal judgment purposive sampling is a type of non-probability sampling technique.
9. (D) Both (A) and (B)  
It is the study of culture and people.
10. (D) All of the above
11. (A) 1-A, 2-B, 3-C
12. (C) Partial listening and distractions  
**Reason** : Rest all the other options are solutions to overcome communication barriers.
13. (C) Communication flows between peers
14. (C) Prasar Bharati is a statutory autonomous body established under the Prasar Bharati Act and came into existence on 23.11.1997. It is the Public Service Broadcaster of the country. The objectives of public service broadcasting are achieved in terms of Prasar Bharati Act through All India Radio and Doordarshan,
15. (A) Information about the network of **United Nations Information** Centers located in 63 countries around the world, the Information Centers communicate the work of the United Nations to people around the world.
16. (C) Statistical Abstracts of India is not based on Primary data collection. It is *not only data collection* but also compilation, processing and preparation of results are carried out by the States for most of the sectors;
17. (D) This is an alternating division and addition series: First, divide by 2, and then add 8.
18. (D) Mustard is an oil seed while the rest are food grains.
19. (C) If either I or II is strong  
The control of population on one hand seems to be impossible because of the ever growing needs and the disconcert of the people burn on other hand the control is impossible.

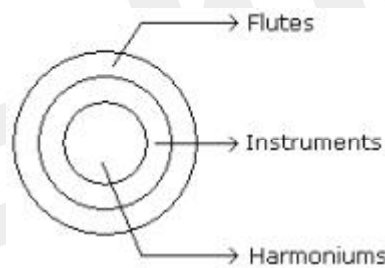
20. (B)



S is to the South-West of R.

21. (A)           As                               Similarly
- |                        |                        |
|------------------------|------------------------|
| $A \xrightarrow{+2} C$ | $E \xrightarrow{+2} G$ |
| $Z \xleftarrow{+2} X$  | $V \xleftarrow{+2} T$  |
| $B \xrightarrow{+2} D$ | $F \xrightarrow{+2} H$ |
| $Y \xleftarrow{+2} W$  | $U \xleftarrow{+2} S$  |

22. (B) All the thieves are criminals while judge is different from these.
23. (B) Clearly, argument I gives a reason in support of the statement and so it does not hold strong against it. The adult education programme needs to be given priority because it shall eliminate adult illiteracy and thus help in further spread of education. So, only argument II is strong enough.
24. (C) Kailash's son's uncle - Kailash's brother so the old man son is Kailash's brother i.e. the old man is Kailash's fathers.
25. (B)



Only (B) follows.

26. (C) Accidental interactions among people blessed with creative muse.
27. (D) An analogy from the physical world to indicate the passing of an era associated with an art movement.
28. (A) Both, in general, include a gamut of distinct but interconnecting activities.
29. (D) The fast changing world of perceptual and transcendental understanding.
30. (D) 'Innovations' and 'original thinking' interpret and develop on past thoughts to suit contemporary needs.
31. (A) A computer virus is a program and part of software that is able to copy itself when it is run. Very often, computer viruses are run as a part of other programs.
32. (B) In computing, **Dynamic Data Exchange (DDE)** is a method of inter process communication under Microsoft Windows or OS/2. It allows one program to subscribe to items made available by another program, for example a cell in a Microsoft Excel spreadsheet, and be notified whenever that item changes.

33. (A) A software bug is an error, flaw, failure or fault in a computer program or system that causes it to produce an incorrect or unexpected result, or to behave in unintended ways. In programming jargon, "errors" are known as "bugs". There are many apocryphal stories about the origin of this term and how it got applied to programming.
34. (B) Multimedia is content that uses a combination of different content forms such as text, audio, images, animations, video and interactive content. Multimedia contrasts with media that use only rudimentary computer displays such as text-only or traditional forms of printed or hand-produced material.
35. (D) Computer is an electronic device that can store, retrieve and process both qualitative and quantitative data quickly and accurately.
36. (D) All of the above
37. (C) The Solicitor General of India is below the Attorney General for India, who is the Indian government's chief legal advisor, and its primary lawyer in the Supreme Court of India. The Solicitor General of India is appointed for the period of 3 years. The Solicitor General of India is the secondary law officer of the country, assists the Attorney General, and is himself assisted by several Additional Solicitors General of India. The Solicitor General and the Additional Solicitors General advise the Government and appear on behalf of the Union of India in terms of the Law Officers (Terms and Conditions) Rules, 1972. However, unlike the post of Attorney General for India, which is a Constitutional post under Article 76 of the Constitution of India, the posts of the Solicitor General and the Additional Solicitors General are merely statutory.
38. (D) 1992
39. (B) The International Institute for Educational Planning (IIEP - UNESCO) is an arm of UNESCO created in 1963 in Paris, France. It develops the capacities of education actors to plan and manage their education systems through its programmes of training, technical assistance, policy research and knowledge sharing.
40. (C) The Rehabilitation Council of India (RCI) was set up as a registered society in 1986. On September, 1992 the RCI Act was enacted by Parliament and it became a Statutory Body on 22 June 1993. The Act was amended by Parliament in 2000 to make it more broad-based. The mandate given to RCI is to regulate and monitor services given to persons with disability, to standardize syllabi and to maintain a Central Rehabilitation Register of all qualified professionals and personnel working in the field of Rehabilitation and Special Education. The Act also prescribes punitive action against unqualified persons delivering services to persons with disability.
41. (A) Planktons are passively floating in upper water, nektons are actively swimming while benthos lead sedentary life upon the sea bottom. Planktons are producers and are present in large number.
42. (B) Some plants and animals act as the measure of existing environmental conditions because of their response to these conditions. The organisms are called bio indicators. From the given options, stone flies do not act as bio indicator of water pollution.
43. (B) Competition is rivalry for obtaining the same resource. Competition of light, nutrients and space is most severe between closely related organisms growing in the same area/niche, due to overproduction of population in the same area/niche.
44. (B) SPM is suspended particulate matter which is less than 10 p.m. remaining in air for more than one day to several weeks. It includes aerosol, dust, mist, smoke, soot etc.
45. (A) Population has several characteristics or attributes which is a function of the whole group and not of individual. Age distribution is one of them that is the number or the percentage of individuals in a population in different age groups. This is represented geometrically in the form of age pyramid.

46. (D) Required difference  

$$= (272 + 240 + 236 + 256 + 288) - (200 + 224 + 248 + 272 + 260)$$

$$= 88.$$

47. (B) Total number of Peons working in the Company in 1999  

$$= (820 + 184 + 152 + 196 + 224) - (96 + 88 + 80 + 120)$$

$$= 1192.$$

48. (A) Number of Managers working in the Company :  
 In 2010 = 760.  
 In 2015 =  $(760 + 280 + 179 + 148 + 160 + 193) - (120 + 92 + 88 + 72 + 96)$   

$$= 1252.$$

∴ Percentage increase in the number of Managers

$$= \left[ \frac{(1252 - 760)}{760} \times 100 \right] \% = 64.74\%.$$

**Number of Technicians working in the Company :**

In 2010 = 1200.  
 In 2015 =  $(1200 + 272 + 240 + 236 + 256 + 288) - (120 + 128 + 96 + 100 + 112)$   

$$= 1936.$$

∴ Percentage increase in the number of Technicians

$$= \left[ \frac{(1936 - 1200)}{1200} \times 100 \right] \% = 61.33\%.$$

**Number of Operators working in the Company :**

In 2010 = 880.  
 In 2015 =  $(880 + 256 + 240 + 208 + 192 + 248) - (104 + 120 + 100 + 112 + 144)$   

$$= 1444.$$

∴ Percentage increase in the number of Operators

$$= \left[ \frac{(1444 - 880)}{880} \times 100 \right] \% = 64.09\%.$$

**Number of Accountants working in the Company :**

In 2010 = 1160.  
 In 2015 =  $(1160 + 200 + 224 + 248 + 272 + 260) - (100 + 104 + 96 + 88 + 92)$   

$$= 1884.$$

∴ Percentage increase in the number of Accountants

$$= \left[ \frac{(1884 - 1160)}{1160} \times 100 \right] \% = 62.41\%.$$

**Number of Peons working in the Company :**

In 2010 = 820.  
 In 2015 =  $(820 + 184 + 152 + 196 + 224 + 200) - (96 + 88 + 80 + 120 + 104)$   

$$= 1288.$$

∴ Percentage increase in the number of Peons

$$= \left[ \frac{(1288 - 820)}{820} \times 100 \right] \% = 57.07\%.$$

Clearly, the percentage increase is maximum in case of Managers

49. (B) Total number of employees of various categories working in the Company in 2012 are :
- Managers =  $(760 + 280 + 179) - (120 + 92) = 1007$ .  
Technicians =  $(1200 + 272 + 240) - (120 + 128) = 1464$ .  
Operators =  $(880 + 256 + 240) - (104 + 120) = 1152$ .  
Accountants =  $(1160 + 200 + 224) - (100 + 104) = 1380$ .  
Peons =  $(820 + 184 + 152) - (96 + 88) = 972$ .

∴ Pooled average of all the five categories of employees working in the Company in 2012

$$= \frac{1}{5} \times (1007 + 1464 + 1152 + 1380 + 972)$$

$$= \frac{1}{5} \times (5975)$$

$$= 1195.$$

50. (D) Total number of Operators who left the Company during 2010 – 2015  
=  $(104 + 120 + 100 + 112 + 144)$   
= 580.

Total number of Operators who joined the Company during 2010 – 2015  
=  $(880 + 256 + 240 + 208 + 192 + 248)$   
= 2024.

∴ Required Percentage

$$= \left( \frac{580}{2024} \times 100 \right) \% = 28.66\% \approx 29\%.$$