

**Section 1 - Comprehension**

Directions for Questions 1-5:

Read the passage and answer the questions that follow on the basis of the information provided in the passage.

**Cyber crime Syndicates and Sasser**  
(Source: expresscomputeronline - By Felix Mohan)

Money, not notoriety, is the motive behind today's worms. There exists a flourishing market for large blocks of remotely controllable, infected machines. Sobig demonstrated the close nexus between malware writers and spammers— machines infected by the Sobig mass mailing worm were offered to spammers; \$5000 for 10,000 compromised machines.

The thriving market for subverted PCs has swung the underworld into hyperactivity. The past ten months have seen several hacker groups and cyber crime syndicates setting up attack networks (botnets) and releasing remote attack tools through increasingly crafty malware such as Blaster, Sinit, MyDoom, Phatbot, Bagle and Netsky. In February 2004, these business rivals unleashed the Internet's biggest cyber war forcing corporates to scurry for cover as the world watched helplessly. The gangs hurled embedded abuses at each other through their worm code, and launched direct attacks on their adversaries' compromised machines, deleting registry entries and backdoors, and installing their own remote access tools instead.

The Sasser worm should be viewed against this broader canvas. Three days after its release, the creators of Netsky claimed credit for the Sasser worm with supporting evidence that convinced security experts. A few days later, an 18-year-old German student confessed to writing the Sasser worm. He is also suspected of writing the Netsky.ac worm variant that appeared three days after Sasser. Soon after his arrest, the Sasser. E worm variant, programmed to remove registry entries used by the Bagle worm variants, was released. Unlike the email worms, Sasser requires no user intervention. It scans for machines having the Local Security Authority Subsystem Service (LSASS) vulnerability on its own; detecting a vulnerable system, it creates a remote connection to and installs a File Transfer protocol (FTP) server to download itself on to the new host. However, the spread of the Sasser depends upon the users' proclivity to patch vulnerable machines. The worm will start to slow down as users start installing the latest anti-virus, firewalls and patches; and would eventually fade away. Unless a new variant comes along.

Exploits for five of the 14 LSASS vulnerabilities fixed in the MS04-011 patch release were out on the Internet within six days. So one can be reasonably sure that worms that use these exploit codes will be created shortly. However, as in the case of Sasser, other attack tools favoured by hackers will be upgraded with the new exploit codes, before creating worms that use them.

1) Which of the following can be proclaimed TRUE about variants?

- i) Variants can be written with relative ease once the initial worm/virus has been coded.
- ii) Variants more or less exploit the same set of vulnerabilities.
- iii) Variants would make the anti-virus solution more complex than if there were no variations.
- iv) It cannot be called a variant if it is written by the same person who wrote the initial worm/virus.

- A) i and iii
- B) i, ii and iii
- C) ii, iii and iv
- D) All the options

2) The cyber crime syndicates have gone on a war footing chiefly because:

- i) They work for rival anti-virus firms.
- ii) They all want the largest piece of the spam market.
- iii) They have ideological differences on how viruses should function.
- iv) A lucrative market for compromised machines has made them business rivals.

- A) ii and iii
- B) i and iv
- C) ii and iv
- D) All the statements

3) The methodologies adopted by the cyber crime syndicates to fight each other include:

- A) Abusing each other using worm/virus code
- B) Taking control of a machine compromised by a rival syndicate
- C) Disabling the rival worm/virus by deleting registry entries
- D) All the options

4) In order to protect yourself from Sasser and other worms, you would:

- A) Install the latest OS and product patches
- B) Use a firewall
- C) Install a trusted anti-virus and always keep it updated
- D) All the options

5) One might say that the MS04-11 patch from Microsoft was:

- A) Partially successful
- B) A complete failure
- C) A complete success
- D) None of the options

Directions for Questions 6-10:

Read the passage and answer the questions that follow on the basis of the information provided in the passage.

**Wireless Networks**

Many computer users search for an available wireless network to tap into—whether at the mall, at school or at home—and whether they have permission to use that network or not. Knowingly or unknowingly, these wireless "parasites" may be doing more than filching a signal. When they connect, they can open up the

## Series A

network—and all the computers on it—to an array of security breaches.

These problems are compounded when someone allowed to use an organization's wireless network adds an unauthorized wireless signal to increase the main network's signal strength. These unauthorized access points are especially vulnerable, often unprotected by any security measures that may exist on the main network. At home, people usually use passwords to protect their wireless network from unauthorized access. But a new study by the A. James Clark School of Engineering's Michel Cukier indicates passwords alone may not provide enough protection for home wireless networks and are particularly inadequate for the wireless networks of larger organizations. Cukier is an assistant professor of mechanical engineering and affiliate of the Clark School's Center for Risk and Reliability and Institute for Systems Research at the University of Maryland.

At many organizations and locations around the country, thousands of users access widespread wireless network legitimately at any given time. But in turn, some of these users set up their own wireless networks, linked to the official network, to increase the signal in their office or home—what computer experts call an unmanaged wireless access point. "If these secondary connections are not secure, they open up the entire network to trouble," Cukier said. "Unsecured wireless access points pose problems for businesses, cities and other organizations that make wireless access available to customers, employees, and residents. Unsecured connections are an open invitation to hackers seeking access to vulnerable computers."

Cukier recommends that wireless network owners and administrators take some precautions to better secure wireless networks from "parasites" trolling for access and unsecured connections set up by legitimate users among which are -

**Limited signal coverage:**

Limit the strength of your wireless network so it cannot be detected outside the bounds of your home or office.

**WPA/WEP encryption:**

Encrypted communication will protect confidential information from being disclosed. If the traffic over the wireless network is encrypted, an attacker must decrypt the password before retrieving information transmitted over the network. There are two encryption schemes available: Wired Equivalent Privacy (WEP) and Wi-Fi Protected Access (WPA). In practice, only one of them can be used at a time. Regular changing of the encryption key may also help to protect the network. Whenever possible, WPA should be used as WEP can be decrypted by hackers equipped with special software.

**Key management** Even if encryption is used, if the key to this encryption (generated by the network) is not changed often, a hacker might crack the key and decrypt the communication. Therefore, the key must be regularly changed.

6) Identify the **INCORRECT** statement(s):

**A) Encrypted communication is insecure because hackers can crack all keys.**

B) Encrypted communication can protect confidential information.

C) Insecure secondary connections can open up an entire network to hackers.

D) Secondary networks are also called unmanaged wireless access points.

7) **Limited signal coverage helps secure wireless networks against pirates because:**

A) Encryption is not required to secure communication.

**B) The network cannot be detected outside the house/office.**

C) It does not allow unauthorized access points to be set up.

D) Wireless pirates cannot filch signals from limited signals.

8) **Security breaches are compounded when:**

A) Wireless networks do not have limited signal coverage.

**B) Unauthorized access points are used to increase signal strength.**

C) Users set up wireless networks without linking to the official one.

D) All the options

9) **How does encryption help in securing confidential information?**

i) **Regularly changed keys prevent hackers from accessing information.**

ii) **Hackers have to decrypt passwords before accessing information.**

iii) **Parasites cannot access encrypted information over a wireless network.**

iv) **Only passwords provide inadequate protection from computer hackers.**

A) i and iii

B) i, ii, iv

C) i and ii

D) i, iii, iv

10) **What is an unmanaged system access point?**

A) A network access point which doesn't have password protection

**B) A user's personal wireless network, linked to the official network**

C) An access point created to filch a wireless signal from another point

D) An array of security breaches in an official wireless network

**Directions for Questions 11-15:**

Read the passage and answer the questions that follow on the basis of the information provided in the passage.

From EAI to SOA

Putting a new site up on the web is a pretty straightforward process. The pages and the transport mechanism must conform to simple standards, and the site must be registered, but once this is done, visitors can find it and use it with ease. They need to know

nothing about how the site was built, where the data comes from, or where or how the processing is carried out. The ease of use of the web - and the explosive surge in Internet use that followed its development - is the blueprint for the service-oriented architecture (SOA), the new paradigm for enterprise software design and integration that is sweeping through the business world. The goal of the SOA is no less ambitious: whenever a business needs to automate a business function or process, it merely plugs into a 'service', just like logging on to a web site. Sometimes that service is an existing application, maybe bespoke, maybe a commercial package; sometimes it is externally operated and accessed over the Internet. To the system accessing the service, it shouldn't matter.

By using this 'loosely coupled' architecture, customers hope to dramatically slash the cost of developing, integrating and maintaining software. How? By re-using services whenever they can, rather than rebuilding or re-engineering them; by making their software accessible through standard interfaces; and by avoiding expensive engineering and project management issues every time an application needs to be replaced, implemented or upgraded. Powerful as all this is, the SOA is about much more. As applications or automated processes are exposed as services, businesses have the opportunity to re-use them as they wish. And that means they can combine anything from a handful to hundreds or even thousands of 'services' into new combinations, or 'composite applications'. That gives organizations the ability to customize their processes, even using packaged applications, as never before. Examples of these more advanced composite applications are still rare, largely because most existing applications have yet to fully opened up, but also because the architectural decisions and platforms need to be put in place. But once this is done, composite applications should prove easier to build than completely new applications, because they use services provided by existing, stable, underlying applications.

They should also address many of the problems encountered when integrating business applications using traditional enterprise application integration (EAI) systems. These systems have often been employed with the goal of creating seamless end-to-end processes, but projects often involve 'hard wiring' that proves expensive and inflexible. The key technological development that has made all this possible is, of course, web services. Web services, while neither entirely new nor as completely functional as some of the hype suggests, is unusual in that, like very few other Internet standards, it has the complete and committed support of every vendor in the IT industry; and second, the standards describe a way for systems to interact that is relatively simple, and non-invasive. But the use of web services does not make an SOA. That is a step further and, while fast emerging, is only now becoming widely understood and implemented.

11) To which of the following do Enterprise Application Integration (EAI) and Service Oriented Architecture (SOA) relate?

- A) Complex Application Network Configurations
- B) Web or Application Development that requires integration with external applications**
- C) Application Architecture Re-engineering
- D) Building Composite Applications from scratch

12) Which of the following is NOT the goal of SOA (Service Oriented Architecture)?

- A) Facilitating Application Integration with more ease and flexibility
- B) Reusing external application with loosely coupled architecture
- C) Using Services that are the interfaces exposed to the applications/automated processes
- D) Providing hard wiring between the Applications to be integrated**

13) Which of the following is FALSE w.r.t EAI and SOA?

- A) SOA is cheaper to develop than EAI.
- B) EAI manages data whereas SOA manages services.**
- C) SOA enforces flexibility and ease of development over EAI.
- D) SOA enforces Standards unlike EAI.

14) "Service" in Service Oriented Architecture (SOA) is:

- A) Web service
- B) Business
- C) Automated Process or Application**
- D) Project

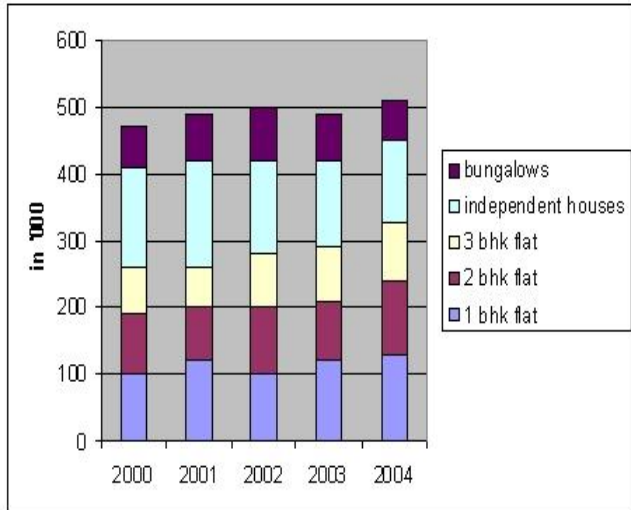
15) To implement Service Oriented Architecture (SOA), all the processes are exposed as services that are plugged-in for facilitating workflow and process management. These services can also be implemented in new combinations termed as \_\_\_\_\_ Applications.

- A) Composite**
- B) External
- C) Additional
- D) Supporting

**Quantitative Ability**  
**Part - A**

Directions for Questions 16-19:

In a cumulative bar graph you can read from top to bottom so it is not necessary to add pattern



16) Out of the five categories of houses built how many witnessed an increase in 2003?

- A) 3                                      B) 1  
C) 2                                      D) None of the options

17) How many more flats were built in 2001 than in 2000?

- A) 5000                                    B) 10,000  
C) 15000                                 D) None of the options

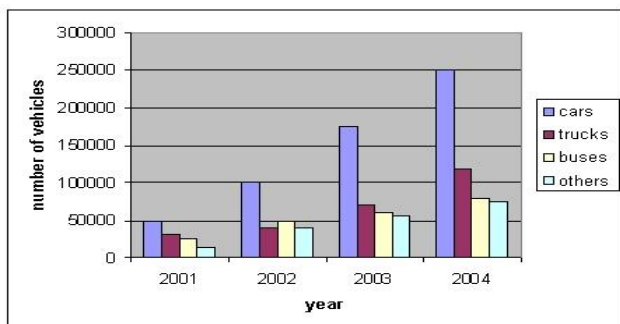
18) If it is thrice as expensive to build a bungalow as that compared to independent house, how much more money was spent on building bungalows than independent houses in 2004?

- A) 100%                                    B) 50%  
C) 75 %                                    D) None of the options

19) Which category of houses witnessed the greatest percentage increase between 2000 and 2004?

- A) 1 BHK flat                              B) 2 BHK flat  
C) BHK flat                                D) Bungalows

Directions for Questions 20-23:



20) In 2002 which category witnessed the greatest increase in production?

- A) Cars                                      B) Trucks  
C) Buses                                    D) Others

21) During 2001, 2002, 2003, 2004 how many more cars were produced than buses?

- A) 25000                                    B) 250000  
C) 300000                                 D) None of the options

22) It costs twice to produce a car in 2001 as compared to 2002. Find the percentage increase in total cost of producing cars during the year 2002?

- A) 200 %                                    B) 300%  
C) 350%                                    D) None of the options

23) Between 2001 to 2004 which category of four wheelers witnessed the greatest average annual percentage increase in production?

- A) Cars                                      B) Buses  
C) Trucks                                    D) Others

Directions for Questions 24-27:

Number of bank branches in urban/semi-urban/Rural areas

	Urban	Semi-urban	Rural
ABN	74	38	11
Baroda	92	44	13
CCI	104	60	39
DFC	67	12	3
ECITY	44	19	11

24) For all banks put together what percentage of branches are in rural areas?

- A) 11.4%                                    B) 12.2%  
C) 12.84%                                 D) 13.06%

25) Which bank has the largest percentage of its branches in semi-urban areas?

- A) ABN                                      B) Baroda  
C) CCI                                        D) DFC

26) Which bank has the highest percentage of its branches in urban and rural areas?

- A) ABN                                      B) Baroda  
C) CCI                                        D) DFC

27) Which bank has the highest percent of its branches in urban areas?

- A) ABN                                      B) Baroda  
C) CCI                                        D) DFC

**Part – B**

28) A rectangular box whose length is equal to its width contains 24 cubic feet. If the height of the box is 1.5 ft, what is the length of the box?

- A) 3                      B) 4                      C) 6                      D) 8

29) The 4 walls of a room of length 10 feet, breadth 8 feet and height 10 feet need to be painted. On one wall, there is a painting measuring 5ft by 2 ft and the wall behind the painting is not to be painted. What is the cost of painting at Rs.20 per square foot?

- A) Rs. 7000                      B) Rs. 15800  
C) Rs. 16000                      D) Rs. 12600

30) What percentage is 2/3rd of a minute of half an hour?

- A) 22%                      B) 33%                      C) 11%                      D) 66%

31) The number of girls in Bangalore colleges in 1992 was 20,000. It increased by 10% in 1993 and then decreased by 10% in 1994. How many girls were there in Bangalore colleges in 1994?

- A) 20000                      B) 19800  
C) 20100                      D) 19600

32) What is the difference of 5 times 125 and 25% of 5 times of 500?

- A) 0                      B) 25                      C) 100                      D) 200

33) When the price of tea is increased by 20%, 4 kg of tea can be purchased for Rs.120. What is the original price of the tea?

- A) Rs.6.50                      B) Rs.6.00  
C) Rs.7.80                      D) Rs.25.00

34) How many litres of a 10% salt solution must be mixed with 30 litres of a 50% salt solution to have a 20% salt solution?

- A) 75                      B) 45                      C) 90                      D) 60

35) A father is twice as old as his son. 20 years ago he was twelve times as old as his son. What are their present ages?

- A) 32 & 16                      B) 36 & 18  
C) 38 & 19                      D) 22 & 44

36) The ratio of the house-rent to the salary of a man is 1:9. If his salary is Rs.900 per month, what is the house-rent?

- A) Rs.100                      B) Rs.90  
C) Rs.99                      D) None of the options

37) An automobile tyre has two punctures. The first puncture by itself would make the tyre flat in 9 minutes. The second puncture by itself would make the tyre flat in 6 minutes. How long will it take for both punctures together to make the tyre flat? (Assume the air leaks out at a constant rate).

- A) 3 3/5 minutes                      B) 4 minutes  
C) 5 1/4 minutes                      D) 7 1/2 minutes

38) There are two taps, tap A and tap B in a tank. If both taps are opened, the tank is drained in 20 minutes. If tap A is closed and tap B is open, the tank will be drained in 30 minutes. If tap B is closed and tap A is open, how long will it take to drain the tank?

- A) 60 minutes                      B) 10 minutes  
C) 45 minutes                      D) 50 minutes

39) The sum of 9 numbers is 72. Of these, the average of the first five is 8 and that of last five is 9. Find the value of the fifth number?

- A) 10                      B) 8                      C) 12                      D) 13

40) The average of 11 observations of an experiment is 15. It was later discovered that while observing the readings one number, which was 24, was wrongly read as 35. The actual average is

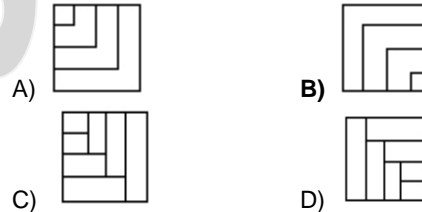
- A) 13                      B) 12                      C) 18                      D) 14

**Analytical and Logical Reasoning**

**Part - A**

41) In a certain code, SIKKIM is coded as THLJLJL. How is TRAINING written in that code?

- A) SQBHOHOH                      B) UQBHOHOF  
C) UQBJOHHO                      D) UQBJOHOF



42) If in a certain language, ENTRY is coded as 12345 and STEADY is coded as 931785, then ARREST is coded as:

- A) 744589                              B) 744193  
C) 166479                              D) 745194

Directions for Questions 43-44:

In each of the following questions are given set of statements followed by conclusions. You have to take the given statements to be true even if they seem at variance from the commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the given statements.

43) Statements: Only writers are poor.  
Only poor eat fruits.

- Conclusions: (i) All writers eat fruits.  
(ii) No writer eats fruit.  
(iii) Some writers eat fruits.  
(iv) All poor eat fruits.

- A) Only (i) follows                      B) Only (ii) and (iv) follows  
C) Only (iii) follows                      D) None of the conclusions follow

44) Statement: No magazine is a newspaper.  
No newspaper is a computer.

- Conclusions: (i) No magazine is a computer.  
(ii) No computer is a magazine.  
(iii) All magazines are computers.  
(iv) All computers are magazines.

- A) Only (i) follows                      B) Only (iii) follows  
C) Only (i) and (ii) follow                      D) None of the options

45) The sum of the geometric progression 1, 4, 9, 16, ..., 144 is

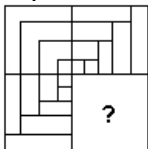
- A) 650                              B) 615                              C) 620                              D) 645

46) What is the next number in the series:

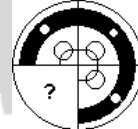
1, 2, 4, 7, 11, 16, \_\_\_

- A) 22                              B) 25                              C) 21                              D) 20

47) Which of the options completes the problem figure?



48) Which of the options completes the problem figure?



Directions for Questions 49-50:

Assuming the statement given in each question to be true, choose the inference as one of the following:

- (A) - True                              (B) - False  
(C) - Uncertain                              (D) - None of the options

49) Statement: No mammals are animal.  
Inference: Some mammals are tigers

- A) A                              B) B                              C) C                              D) D

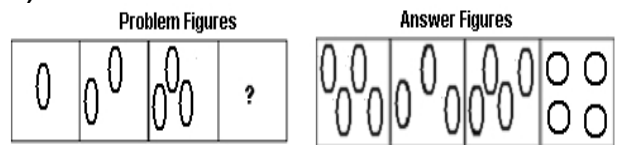
50) Statement: Professional education in India is free.  
Inference: All Indian citizens will become professionals.

- A) A                              B) B                              C) C                              D) D

Directions for Questions 51-52:

In the following questions, three figures are given, that follow a certain sequence or pattern. Find the next figure in the sequence from the Answer choices provided below.

51)



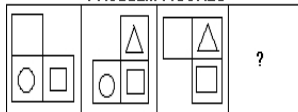
- A) A                              B) B                              C) C                              D) D

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52)

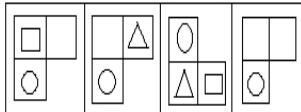
PROBLEM FIGURES



A) A

B) B

ANSWER FIGURES



A

B

C) C

C

D

D) D

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**Part - B**

Directions for Questions 53-56:

Following are the minimum requirements for admission to Little Flower School, Jamshedpur.

- (i) The child must score the cut-off marks in the written examination at the time of admission.
- (ii) The parents must be able to pay Rs.60,000 at the time of admission.
- (iii) The child must not be more than 6 years of age, and not less than 4 years of age as on 01/05/2008 and the child must be physically fit.

- 1. In case the child satisfies all the criteria except (ii), he/she is referred to the Vice-Principal.
- 2. In case the child satisfies all the criteria except (iii), he/she is referred to the Principal.

53) Roopa is 5 years of age. She cleared the cut-off in the written examination, and is physically fit. But her parents are able to pay only a sum of Rs.40, 000 at the time of the admission.

She is:

- A) Given provisional admission
- B) Referred to the Vice-Principal**
- C) Referred to the Principal
- D) Data insufficient

54) Debajyoti scored exactly the cut-off required to pass the examination. He was born on 23 March 2003. His parents are ready to pay Rs. 60,000 at the time of admission. Even though he was not well on the day of the test, he managed to pass the physical fitness test.

He is:

- A) Directly given admission**
- B) Referred to the Vice-Principal
- C) Referred to the Principal
- D) Denied admission

55) Sunil was the topper in the written test. His date of birth is listed as 22<sup>nd</sup> December 2003. He was not able to pass the physical test. However, his parents are willing to pay Rs.60, 000 or more to get him an admission in the school.

He is:

- A) Given provisional admission
- B) Referred to the Principal**
- C) Referred to the Vice-Principal
- D) Denied admission

56) James scored the cut-off required to pass the written test of the school. His date of birth is 16<sup>th</sup> November 2004. His parents are willing to pay the money required to get him an admission in the school. He passed the physical fitness test at the school quite easily.

He is:

- A) Given provisional admission
- B) Referred to the Principal**
- C) Referred to the Vice-Principal
- D) Denied admission

Directions for Questions 57-60:

ABC Medical College is offering scholarships to doctors interested in pursuing PG degree in Medicine. The following criteria need to be adhered to while making selections:

The applicant must:

- i. Have an MBBS degree from a recognized college with minimum 60% marks
- ii. Have cleared a Medical Aptitude Test (MAT) with a minimum of 90% marks
- iii. Be between 23 and 26 years of age as on 31 January 2004
- iv. Have work experience of at least 2 years in a hospital.

However, if the applicant fulfills all the criteria EXCEPT:

- a. Condition (i), but has secured at least 55% marks in MBBS, and, a diploma in any specialized branches of medicine, refer to the Director
- b. Condition (ii), but has a MD, refer to the Chairman

57) Siddharth was awarded the best student trophy on completing his MD at the age of 25. He scored 94% in MAT and 72% in MBBS respectively. He has been working in a hospital and also has his own clinic. He is:

- A) Granted scholarship
- B) Denied scholarship
- C) Referred to the Chairman
- D) Data inadequate**

58) Rajesh secured 68% and 93% in MBBS and MAT respectively. He has been working in the city hospital for the last 3 years. He was born on 20 January 1979. He is:

- A) Granted scholarship**
- B) Denied scholarship
- C) Referred to the Chairman
- D) Referred to the Director

59) Deven's father is an Ayurvedic Doctor. He completed his MBBS degree with 74% marks in 2000 at the age of 21. He scored 86% marks in MAT. He intends to pursue MD and has been working in a reputed city hospital for the past 3 years. He is:

- A) Granted scholarship
- B) Denied scholarship**
- C) Referred to the Chairman
- D) Referred to the Director

60) Jatin completed his MBBS with 57% marks. He has worked in a rural hospital for 2 years and 4 months. He scored 93% marks in MAT. He was born on 18 December 1980. He holds a diploma in pediatrics. He is:

- A) Granted scholarship
- B) Denied scholarship
- C) Referred to the chairman
- D) Referred to the Director**