



PREPARATORY EXAM 2015

COMMON EXAM

GRADE 12

QUESTION PAPER

SUBJECT	:	CAT PAPER 2
TIME	:	3 HOURS
MARKS	:	150

This question paper consists of 15 pages

INSTRUCTIONS AND INFORMATION

1. This question paper consists of:
SECTION A (25 marks)
SECTION B (75 marks)
SECTION C (50 marks)
2. Answer ALL the questions.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Draw a line after each question and start EACH question on a NEW page.
5. Leave a line open after EACH sub-question.
6. In general, a mark is allocated per fact, a 2-mark question would therefore require TWO facts, etcetera.
7. Write neatly and legibly.
8. Good luck.

SECTION A**QUESTION 1: MATCHING ITEMS**

Choose a term/concept from COLUMN B that matches the description in COLUMN A. Write only the letter (A-S) next to the question number (1.1-1.10) on the answering sheet, for example 1.11 Z.

COLUMN A	COLUMN B
1.1 Users are tricked into clicking on an item on a webpage, which acts as a concealed hyperlink.	A Blog
1.2 A concept where learners are allowed to bring and use their own portable devices to work on and access the network.	B Trojan Horse
	C Vlog
	D Mbps
1.3 To gain access to a person's credit card without physically removing it from his/her pocket with Near Field Communication.	E Spyware
	F Grid computing
	G FTP
1.4 Paperless act of transferring money through a computer network.	H Zombies
	I Heartbleed bug
1.5 A type of surveillance software that has the capability to record every keystroke you make to a log file.	J Click Jacking
	K VoIP
1.6 Making use of all the computers in a network to solve a single problem.	L MICR
	M Access control
1.7 A blog that consist of video clips.	N EFT
1.8 Resolution of images	O Keylogger
1.9 When a computer is being hacked by a daemon without the knowledge of the computer user.	P BYOD
	Q Digital pickpocket
1.10 A character recognition system that uses special ink and characters to read hand-drawn objects.	R Ppi
	S Crowd funding

(10 x 1)

[10]

QUESTION 2: MULTIPLE-CHOICE QUESTIONS

Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A-D) next to the question number (2.1-2.10) on the answering paper provided, for example 2.11 D.

- 2.1 Which **ONE** of the following is an example of a web feed that will provide you with information on regular updates of websites?
- A Twitter
 - B RSS
 - C Wiki
 - D Blog
- (1)
- 2.2 Which **ONE** of the following functions is NOT part of cloud computing?
- A Backup of data
 - B Sharing of data
 - C Securing of data
 - D Stealing of data
- (1)
- 2.3 Which **ONE** of the following is a small network that allows more than one user to connect electronic devices inside the area?
- A PAN
 - B HAN
 - C WAN
 - D GAN
- (1)
- 2.4 Which **ONE** of the following is a trustworthy device of identifying and monitoring stock with a POS system?
- A Barcode scanner
 - B ID tags
 - C RFID
 - D Micro chip
- (1)
- 2.5 Which **ONE** of the following refers to a situation where users are redirected to websites with criminal intent by clicking on the advertisement?
- A Redirecting
 - B Linking
 - C Spoofing
 - D Malvertisement
- (1)

- 2.6 This device is **NOT** an example of convergence of computers.
- A Keyboard
 - B Phablet
 - C Smartphone
 - D Tablet
- (1)
- 2.7 Which **ONE** of the following refers to a term where print jobs are placed on the printer waiting area?
- A Buffering
 - B Spooling
 - C Queuing
 - D Waiting
- (1)
- 2.8 Which **ONE** of the following is a cyber-crime where the victim is threatened, intimidated, humiliated and victimised on social platforms?
- A Cyberstalking
 - B Cyberbullying
 - C Cyber-attack
 - D Cyberterrorism
- (1)
- 2.9 Which **ONE** of the following can be used as a wildcard in a query in a database?
- A /
 - B @
 - C +
 - D *
- (1)
- 2.10 Which **ONE** of the following file extensions needs Adobe Reader to open the file with?
- A .rtf
 - B .avi
 - C .exe
 - D .pdf
- (1)

[10]

QUESTION 3: TRUE/FALSE ITEMS

Indicate whether the following statements are **TRUE** or **FALSE**. Choose the answer and write 'true' or 'false' next to the question (3.1-3.5) on the answering sheet provided.

Correct the statement if it is FALSE. Change the underlined word(s) to make the statement TRUE. (You may not simply use the word 'NOT' to change the statement.)

Examples:

QUESTION:	ANSWER:
The <u>keyboard</u> can be used as an input device.	True
A <u>query</u> is used to collect data from a group of people.	False Survey

3.1 A trend is a popular electronic device which everyone wants to obtain. (1)

3.2 The task manager is a utility that analyses and configures various aspects on computer networks. (1)

3.3 Firewall systems prevent unauthorised access to, or from a private network. (1)

3.4 Validation text is the requirements for data to be accepted as valid data in a database. (1)

3.5 Identity theft is when a replica of a website appears to be the real website, to obtain personal information. (1)

[5]

TOTAL SECTION A: 25

SECTION B**QUESTION 4: SYSTEM TECHNOLOGIES**

Study the specifications of the notebook and printer below and answer the questions that follow.

Notebook	Printer
15.6" IdeaPad Core i7 Notebook • Intel Core i7 – 4510u 3.1 GHz • 8GB RAM • 1TB HDD • NVIDIA GeForce 840M 2GB • Build in DVD writer / Blue ray compatible • Webcam • Ethernet • 802.11 g/n • Office 365 personal • Linux OS (Operating system)	J2720 Business 4-in-1 Colour Inkjet • 22 ppm black • 6000 x 1200 dpi • Wi Fi / Ethernet / Bluetooth • USB • A3 Print

- 4.1 The **Intel Core i7-4510u** is a ULV dual-core processor.
Explain briefly what a ULV dual core processor is. (2)
- 4.2 What is the speed of the processor in the specifications above? (1)
- 4.3 4.3.1 Name **ONE** component in the specifications that would influence the overall processing performance of the computer? (1)
- 4.3.2 What is the function of the primary memory? (1)
- 4.4 Name **ONE** advantage of the built-in webcam? (1)
- 4.5 The Notebook is running on a Linux Operating System. This software is open source software.
Define the term **open source software**. (2)
- 4.6 4.6.1 i) What network protocol is listed in the specifications? (1)
- ii) Briefly explain the protocol structure. (1)
- 4.6.2 How can Ethernet assist in using the Notebook for both personal and business purposes? (2)

- 4.7 One of the specifications in the advertisement is '802.11 g/ n.
- 4.7.1 Explain what the 802.11g/n specification would indicate. (1)
- 4.7.2 Explain what the alphabet letters mean that are present in this specification. (1)
- 4.8 The Notebook has an embedded touch pad. Name **TWO** disadvantages of a touch pad. (2)
- 4.9 How will the graphics card enhance the overall performance of the computer? (1)
- 4.10 The advertisement states that the Notebook has a built-in DVD writer and is also Blue ray compatible.
In table format discuss **TWO** differences between a normal DVD and a Blue-Ray DVD. (2)
- 4.11 Study the printer specifications in the advertisement above, and answer the questions that follow:
- 4.11.1 Give **TWO** advantages of having a 4-in-1 printer for office use. (2)
- 4.11.2 Which specification refers to the printing speed? (1)
- 4.11.3 What does the specification 6000 x 1200 dpi refer to? (1)
- 4.11.4 Name **ONE** advantage of an A3 printer for a business. (1)
- 4.11.5 Which function allows the user to print wirelessly from his/her device? (1)

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QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

- 5.1 Internet Service providers (ISP) assist users with multiple functions for example creating a fast Internet connection.
- 5.1.1 Name **TWO** other support functions that the service provider can assist users with. (2)
- 5.1.2 Provide **TWO** important aspects that one needs to take into account when choosing a service provider. (2)
- 5.2 Name **TWO** aspects you should take into consideration before choosing a type of Internet connection (2)
- 5.3 Briefly explain the difference between shaped and unshaped connections. (2)
- 5.4 Wi-Fi is becoming more popular than ADSL.
- 5.4.1 How is it possible to connect to the Internet by using Wi-Fi? (1)
- 5.4.2 When connecting to Wi-Fi in public places – one will receive a message that reads – "*this is not a secure Wi-Fi zone*".
How can the user ensure that his/her computer is protected in such a scenario? (1)
- 5.4.3 Why is it easy for hackers to gain access to a user's computer while the user is connected to the internet via Wi-Fi? (1)
- 5.5 How can you make use of your smartphone to connect your tablet or laptop to the Internet? (2)
- 5.6 5.6.1 Give **ONE** reason why more people are currently using Skype. (1)
- 5.6.2 List **ONE** feature of Skype software. (1)

[15]

QUESTION 6: INFORMATION MANAGEMENT

- 6.1 Explain what is meant by the term plagiarism. (1)
- 6.2 Name **ONE** way academic institutions are monitoring plagiarism. (1)
- 6.3 Retrieving information from people can be done effectively making use of a survey.
Name **TWO** important factors to consider when compiling a survey. (2)
- 6.4 Give **ONE** other method to obtain information from people without using a survey. (1)
- 6.5 In which file-format must data be stored, to ensure that when the data is exported to a spreadsheet or database it can still be processed effectively? (1)
- 6.6 Name the **THREE** components of a final written report. (1)
- 6.7 Name **TWO** features of a spreadsheet which makes it an ideal tool to use in a research project. (2)
- 6.8 Why is it important to have a bibliography included at the end of a research project? (1)

[10]**QUESTION 7: SOCIAL IMPLICATIONS**

- 7.1 In a computer environment, for example in a computer lab at school or in the public library, it is necessary to have an acceptable user policy (AUP). (2)
Give **TWO** criteria that must be included in the AUP.
- 7.2 Telecommuting opportunities are great for single parents and people with physical disabilities.
- 7.2.1 Describe what telecommuting is. (2)
- 7.2.2 How would employees abuse telecommuting? (2)
- 7.3 Malware consists of a number of different forms of software such as spyware. Briefly explain how a keylogger works AND how you would protect yourself when making an online transaction. (2)
- 7.4 In today's way of living, people are faced with information overload. Give **TWO** practical ways in which one can use technology to reduce the problem of information overload. (2)

[10]

QUESTION 8: SOLUTION DEVELOPMENT

- 8.1 What is the difference between **Save** and **Save as** in a Word document? (1)
- 8.2 In 'MS Word' on the 'Insert' tab there is an option to insert a comment.
Give **ONE** example where your educator may make use of the 'comment' function. (1)
- 8.3 What is the function of 'gridlines' in a document? (1)
- 8.4 Identify **TWO** errors in the following HTML code:
<table border = '1'>
 <tr>
 <th> AMOUNT </th>
 <th> PRICE </th>
 <th> TOTAL </th>
 <tr> (2)
- 8.5 ROUND is a function in a spreadsheet to round off numbers to the nearest number after the decimal place.
Explain the difference between ROUNDDOWN and ROUNDUP when referring to the following example:
ROUNDDOWN(4.87,1)
ROUNDUP (2.3,0) (2)

8.6 Study the spreadsheet below and answer the questions that follow:

	A	B	C	D	E
1	SPORT TOURS FUNDS				
2	Name	Grade	Amount	Outstanding Amount	Comment
3	A Burger	10	255		
4	A Blund	11	320		Green
5	B Case	11	270		
6	C Dawnley	10	340		Green
7	D Edwards	12	200		
8	E Harris	10	310		Green

Each learner had to pay R500 to go on the sport tour.

8.6.1 Write down the formula that will be used in **cell D3** to determine the outstanding amount. (1)

8.6.2 There is a comment next to the names of some learners in **column E**. The criteria is that if a learner paid R300 and more 'Green' must appear. Write down the complete function that would be used in **cell E3**. (3)

8.6.3 Which function must be used to determine how much money was only paid by the Grade 11's? (1)

8.7 Study the following 'Design view' of a table in a database, and answer the questions that follow:

TOUR FUNDS		
Field Name	Data Type	
Name	Short Text	
Surname	Short Text	
Student number	Short Text	
Cell phone number	Number	
Amount paid	Currency	

8.7.1 Which field would be the most appropriate for a primary key? (1)

8.7.2 What is the function of the primary key in a table? (1)

8.8 When opening a file on your computer, a message might appear indicating that the file is 'read-only'.

Give **ONE** reason why the file may be 'read-only'. (1)

[15]

TOTAL SECTION B: 75

SECTION C**QUESTION 9: INTEGRATED SCENARIO****SCENARIO**

Your neighbour Johnny has recently started a new business from his home: DESIGN SIGN XPERTS.

He needs a technical assistant to help him and he approached you due to your CAT skills. Help him to understand how computer technology can make his business more efficient.

- 9.1 Johnny heard people refer to his business as a SOHO business.
Explain to Johnny what a SOHO business is. (2)
- 9.2 Johnny filled in an online form to join a forum group that is called: SBIF (Small Business Information Forum).
Before submitting the form, Johnny was asked to fill in a 'turning number' to ensure he is not a 'bot'.
- 9.2.1 What is a forum? (1)
- 9.2.2 Why do companies on the Internet make use of a 'turning number'? (2)
- 9.2.3 Explain to Johnny what a 'bot' is. (2)
- 9.3 Johnny was told that making use of social media, can assist in advertising his business.
State **TWO** advantages for Johnny to advertise his business on social media. (2)
- 9.4 A marketing agent visited Johnny and advised him to make use of a QR code.
- 9.4.1 Explain to Johnny what a QR code is. (1)
- 9.4.2 How can Johnny create a QR code for his business? (1)
- 9.4.3 Give **TWO** advantages of using a QR code in Johnny's' online marketing campaign. (2)
- 9.5 Johnny has taken out a new cell phone contract for the business.
The service provider advises Johnny to choose a **phablet**.
Give **TWO** benefits that a phablet would offer Johnny if he has to go to Cape Town for a business meeting. (2)

- 9.6 Johnny wants to send an email with an attachment to his friend.
- 9.6.1 Give **TWO** reasons why Johnny might have received an error message when sending the email. (2)
- Johnny sends an email individually to all his clients to attend a function.
- 9.6.2 How can Johnny prevent sending the mails individually? Name **TWO**. (2)
- 9.7 Johnny noticed that if he leaves his laptop unattended for a while it seems like his laptop has shut down.
- 9.7.1 Explain to Johnny what the difference is between sleep mode and hibernate mode. (2)
- 9.7.2 What is the function of a screen saver? (1)
- Johnny is upset because he has an antivirus program on his laptop although he might have got a virus via a 'backdoor' also known as a 'trapdoor'.
- 9.7.3 Explain to Johnny what a **back/trap door** is. (1)
- 9.8 Johnny wants to buy a printer for his new business.
- 9.8.1 Briefly explain to Johnny what type of printer you would recommend for his design business AND specify why you would recommend that specific printer? (2)
- Johnny tried to print a document. However, even if he chooses print, the document is still not printing.
- 9.8.2 Give **TWO** possible reasons why the printer might not work. (2)
- Johnny sees the word 'Default printer'.
- 9.8.3 Explain to him what a default printer is. (1)
- 9.9 Johnny often has to leave the business to deliver completed designs to his customers.
- Give **TWO** examples of biometric features that can prevent anyone from accessing his laptop. (2)

- 9.10 The operating system on his computer has a software bug.
- 9.10.1 Mr Jones believes that a bug and a virus are the same thing.
Do you think he is correct? Motivate your answer. (No mark will be awarded for only a yes/no answer)? (2)
- 9.10.2 What software would you recommend to fix the problem? (1)
- 9.11 Johnny wants to be innovative by creating a Wi-Fi hotspot for his customers.
- 9.11.1 Name **TWO** security measures Johnny must install when creating a Wi-Fi hotspot. (2)
- 9.11.2 Briefly explain the term WiMAX. (1)
- 9.12 Johnny wants to create a website for his business.
State **THREE** guidelines that would make a website easy to use and read. (3)
- 9.13 Johnny wants to advertise his business on an e-commerce site.
Give **TWO** disadvantages of e-commerce sites. (2)
- 9.14 Johnny is considering hiring a network administrator to manage the website of his business.
State **TWO** typical functions of a network administrator. (2)
- 9.15 Johnny wants his business to be ergonomically friendly.
- 9.15.1 What is E-waste? (1)
- 9.15.2 State **TWO** ways in which Johnny can ensure that his business is ergonomically friendly. (2)
- 9.16 Johnny has done a lot of valuable work on his computer and needs to back up his work.
- 9.16.1 How often will you advise Johnny to make a backup of his work? (1)
- 9.16.2 Why is it important to make a backup of your work? (1)
- 9.16.3 State **TWO** ways to make a backup secure. (2)

TOTAL SECTION C: 50

GRAND TOTAL: 150