

SULIT



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**PEPERIKSAAN AKHIR
SEMESTER II
SESI 2013/2014**

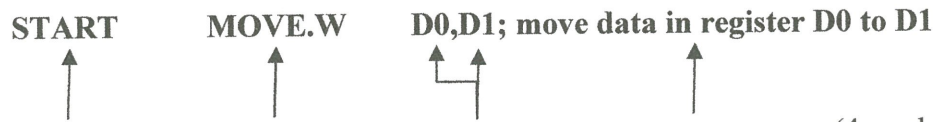
NAMA KURSUS : ASAS SENIBINA KOMPUTER
KOD KURSUS : DAT 10403
PROGRAM : 1 DAT
TARIKH PEPERIKSAAN : JUN 2014
JANGKA MASA : 2 JAM
ARAHAN : JAWAB TIGA (3) SOALAN
SAHAJA DARIPADA LIMA (5)
SOALAN

KERTAS SOALAN INI MENGANDUNGI **SEMBILAN (9)** MUKA SURAT

SULIT

BAHASA MELAYU

S1 (a) Bagi pernyataan arahan di bawah, labelkan yang berikut:



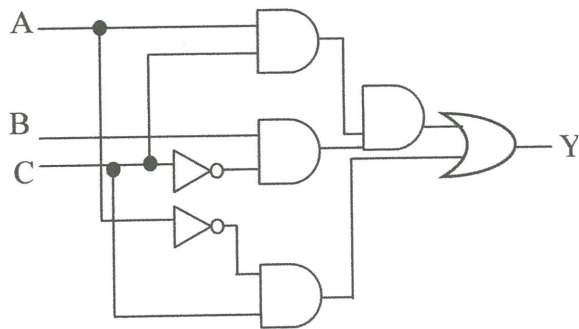
(4 markah)

(b) Jelaskan perbezaan di antara bas data, bas alamat dan bas kawalan.

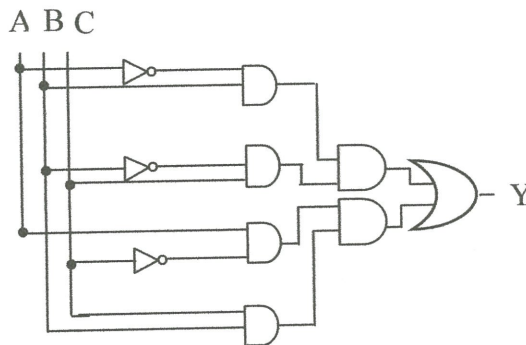
(6 markah)

(c) Kirakan nilai bagi Y sekiranya nilai bagi A=1, B=0 dan C=1. (Tunjukkan jadual kebenaran bagi setiap operasi yang berlaku.)

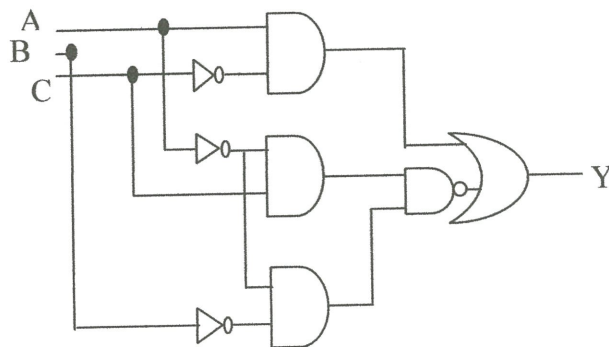
(i)



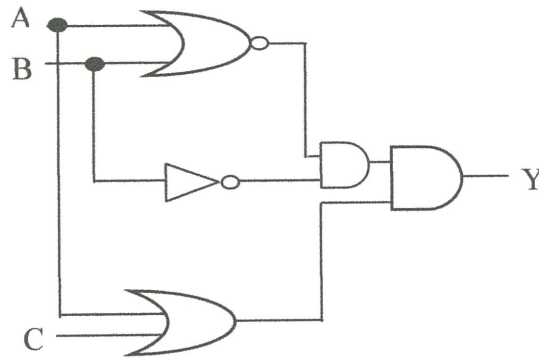
(ii)



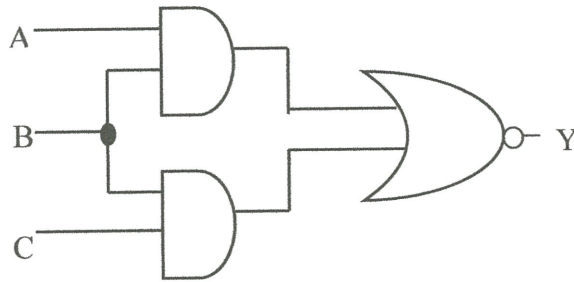
(iii)



(iv)



(v)



(10 markah)

- S2 (a) Pemrosesan komputer memerlukan satu arahan tunggal yang dikenali sebagai kitar arahan mesin.
Nyatakan **EMPAT (4)** langkah pelaksanaan kitar arahan mesin. (4 markah)
- (b) Jelaskan **EMPAT (4)** langkah pelaksanaan kitar arahan mesin. (6 markah)
- (c) Gambarkan simbol logik bagi get logik di bawah:
- (i) Get Dan
 - (ii) Get Tak
 - (iii) Get Atau
 - (iv) Get Tak-Atau
 - (v) Get Tak-Dan
- (10 markah)

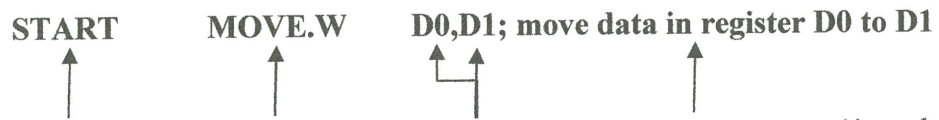
- S3** (a) Opkod biasanya diwakilkan dalam bentuk mnemonik yang menentukan operasi.
Nyatakan maksud setiap opkod berikut:
- (i) ADD
 - (ii) SUB
 - (iii) MPY
 - (iv) DIV
- (4 markah)
- (b) Terangkan **TIGA (3)** jenis bahasa pengaturcaraan berikut:
- (i) Bahasa Mesin
 - (ii) Bahasa Penghimpun
 - (iii) Bahasa Aras Tinggi
- (6 markah)
- (c) Tukarkan setiap sistem penomboran dibawah:
- (i) Binari ke Desimal : 1111111.11111
 - (ii) Hexadesimal ke Binari : FB17
 - (iii) Desimal ke Hexadesimal : 75.85
 - (iv) Oktal ke Hexadesimal : 307.641
 - (v) Hexadesimal ke Oktal : A5D.3B
- (10 markah)
- S4** (a) Nyatakan apa yang dimaksudkan dengan ingatan meruap dan ingatan tak meruap.
- (4 markah)
- (b) Terangkan **DUA (2)** jenis memori utama di dalam sistem komputer.
- (6 markah)
- (c) Hasilkan gambarajah serta terangkan **EMPAT (4)** operasi asas bagi senibina komputer.
- (10 markah)

- S5**
- (a) Nyatakan perbezaan di antara sampukan bertopeng dan sampukan tidak bertopeng. (4 markah)
 - (b) Terangkan **ENAM (6)** langkah bagaimana sampukan dalam mikroprosesor dikenalpasti. (6 markah)
 - (c) Gambarkan carta alir yang dapat menerangkan dengan ringkas proses pembacaan satu blok data menggunakan:
 - (i) I/O teraturcara
 - (ii) I/O pacuan sampukan
 - (iii) Capaian Ingatan Terus(10 markah)

-SOALAN TAMAT-

ENGLISH

Q1 (a) For command statement below, label as follow:



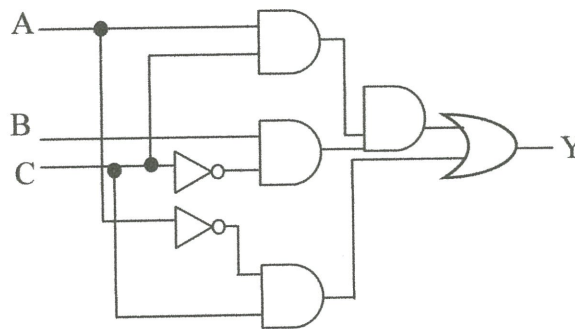
(4 marks)

(b) Explain the difference between data, address and control bus.

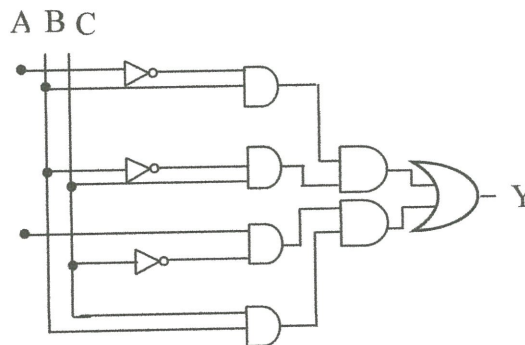
(6 marks)

(c) Calculate the value of Y when the value of A=1, B=0, C=1. (Show the truth table for each of the operations that occur.

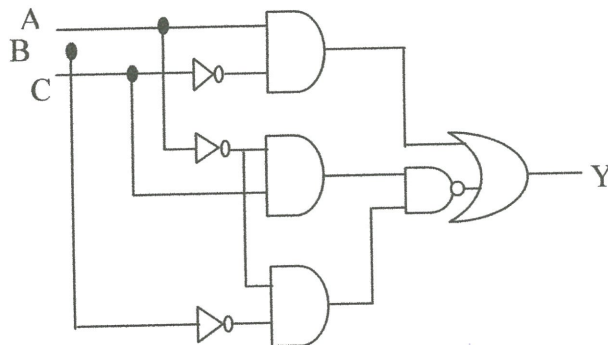
(i)



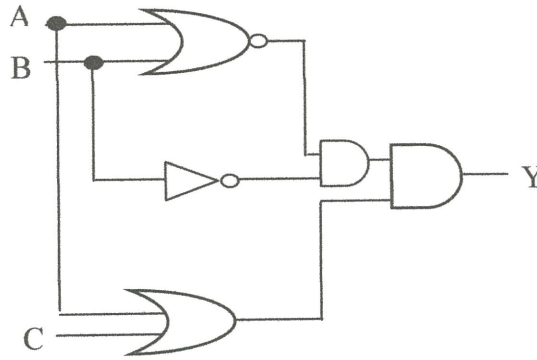
(ii)



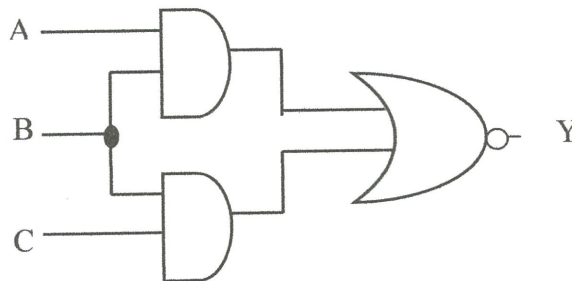
(iii)



(iv)



(v)



(10 marks)

Q2 (a) Computer processing needs a single instruction called machine instruction cycle.
State **FOUR (4)** steps of machine instruction cycle. (4 marks)

(b) Explain **FOUR (4)** steps of machine instruction cycle. (6 marks)

(c) Draw logic symbol for logic gate below:

(i) And gate

(ii) Not gate

(iii) Or gate

(iv) Nor gate

(v) Nand gate

(10 marks)

- Q3** (a) Opcode usually represented in mnemonic form indicate the operations. State the meaning of the following opcode:
- (i) ADD
 - (ii) SUB
 - (iii) MPY
 - (iv) DIV
- (4 marks)
- (b) Explain **THREE (3)** types of programming languages below:
- (i) Machine language
 - (ii) Assembly language
 - (iii) High level language
- (6 marks)
- (c) Convert each numbering system below:
- (i) Binary to Decimal : 1111111.11111
 - (ii) Hexadecimal to Binary : FB17
 - (iii) Decimal to Hexadecimal : 75.85
 - (iv) Octal to Hexadecimal : 307.641
 - (v) Hexadecimal to Octal : A5D.3B
- (10 marks)
- Q4** (a) State the meaning of volatile and non-volatile memory. (4 marks)
- (b) Explain **TWO (2)** types of main memory in the computer system. (6 marks)
- (c) Create diagram and explain **FOUR (4)** basic operations of computer architecture. (10 marks)

- Q5** (a) State the difference of maskable and nonmaskable interrupt. (4 marks)
- (b) Describe **SIX (6)** steps how interrupt in microprocessor is initiated. (6 marks)
- (c) Draw the flow chart that can explain the process of reading one block of data by using:
- (i) Programmed I/O
 - (ii) Interrupt-driven I/O
 - (iii) Direct Memory Access (10 marks)

- END OF QUESTION -