**DO NOT WRITE IN THIS BOX**

**SCORE**

**20**

School of Nursing & Midwifery

Clinical Module 3

300NAS209

Adult Branch

Numeracy Test

**12th May 2008**

**Duration: 1 Hour**

External Examiner: Julie Thompson and Internal Examiners

Please read each question carefully

**All** questions must be attempted.

Please use column to show working out

Answers should be written in the space provided

Answer should include appropriate unit in the answer e.g. 20 mL or 60 mg

Please note the use of a Calculator is not allowed and all Mobile Phones are turned off

Please Print Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Student number \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Personal Tutor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Do not remove this paper from the Examination Room**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Please use this column to show working out** | **Answer** |  |
| **Question 1** Convert 500 mg to grams | 500mg/1000=0.5 grams |  |  |
| **Question 2**Covert 1.5 litres to mL | 1.5L x 1000=1500 mL | **Answer** |  |

**Question 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Please calculate the total fluid intake from 0800 - 1600hours**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Time | By mouth |  | Intravenous or other routes |  | Urine | Faeces | Vomit |
|  | Amount mL | Type | Amount mL | Type |  |  |  |
| 0800 | 120 | Milk | C/F 500 | No4 | 200 | +++ |  |
| 0900 |  |  |  |  |  |  |  |
| 1000 | 180 | Tea |  |  |  |  |  |
| 1100 |  |  |  |  |  |  |  |
| 1200 | 200 | Soup | 500 | No4 | 220 |  |  |
| 1300 | 100 | Tea | ‘0’ | No1 |  |  |  |
| 1400 |  |  |  |  |  |  |  |
| 1500 | 60 | Juice |  |  |  |  |  |
| 1600 |  |  |  |  | 225 |  |  |
| 1700 | 180 | tea |  |  |  |  |  |
| 1800 | 75 | Juice | 1000 | No 1 |  |  |  |

   **Answer 120+180+200+100+60+500+500=1660 mL intake** |  |

**Question 4**

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| --- | --- | --- | --- |
| A patient has cardiac failure and has a daily fluid allowance of **1500 mL.**He has taken **900 mL**.What percentage of his allowance is left? |  | **Answer**(600 x 100%) / 1500 = percentage left = 40% | **Do not write in this column** |

**Question 5**

|  |  |  |  |
| --- | --- | --- | --- |
| A patient requires Risperidone500 microgramsThe stock dose is 1mg / mL. What volume is required?         |  | **Answer**(0.5/1) x (1/1) = 0.5/1=0.5 mL | **Do not write in this column** |

**Question 6**

|  |  |  |  |
| --- | --- | --- | --- |
| A patient has been prescribed 15 mg Ketamine The stock available is 50mg / 5mL. What volume of Ketamine is required?                                                              |  | **Answer****(15/50) x (5/1) = 75/50=1.5 mL** | **Do not write in this column** |

**Question 7**

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| --- | --- | --- | --- |
| A patient has been prescribed Prednisolone 40 mgThe stock available is 5 mgHow many tablets will you administer? |  | **Answer**40/5=8 tablets | **Do not write in this column** |

**Question 8**

|  |  |  |  |
| --- | --- | --- | --- |
| Digoxin 250 micrograms is prescribedThe stock available is 0.25 mgHow many tablets will you administer? |  | **Answer**0.25 mg=250mcg -> 250/250=1 tablet | **Do not write in this column** |

**Question 9**

|  |  |  |  |
| --- | --- | --- | --- |
| A patient is prescribed Budesonide 1000 micrograms by nebuliser.The medication is available as 500 micrograms / 1mL ampoule.      How many ampoules are required? |  | **Answer**(1000/500) x (1/1) = 2 mL 2 mL/ 1mL ampoule = 2 Ampoules  | **Do not write in this column** |

**Question 10**

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| --- | --- | --- | --- |
| A patient is prescribed 60 mg of  PethidineThe stock dose is 100mg / 2mL ampoule. What volume will you require?    |  | **Answer**(60/100) x (2/1) = 120/100=12/10=1.2mL | **Do not write in this column** |

**Question 11**

|  |  |  |  |
| --- | --- | --- | --- |
| A patient is prescribed 80 mg of Tramadol Hydrochloride injectionThe stock dose is 100mg / 2 mL What volume will you require? |  | **Answer** (80/100) x (2/1) = 160/100=1.6 mL | **Do not write in this column** |

**Question 12**

|  |  |  |  |
| --- | --- | --- | --- |
| Heparin is available as 5000 units/5mL.What volume is needed to give 25000 units? |  | **Answer**(25000/5000)x(5/1)=(25/5)x(5/1)=125/5=25mL | **Do not write in this column** |

**Question 13**

|  |  |  |  |
| --- | --- | --- | --- |
| A 75kg adult requires Enoxaparin **1.5mg / kg** for treatment of a DVT. What dose is required?                                                                            |  | **Answer**75 x 1.5 = 75 + 37.5 = 112.5mg | **Do not write in this column** |

**Question 14**

|  |  |  |  |
| --- | --- | --- | --- |
| A 62 kg man requires Atenolol via IV infusion. The dose is **150micrograms/kg.** Atenolol injection is available as500 micrograms in 10 mL ampoule. How many mL of Atenolol are required to make up the infusion?             |  | **Answer**Dose required = 62x150 = 9300mcg(9300/500) x (10/1) = 93000/500 = 930/5=186mL | **Do not write in this column** |

**Question 15**

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| --- | --- | --- | --- |
| A patient is to receive 1.5 Litres of Jevity Plus over 8 hoursThe feed commenced at 1800 hours.The patient has a break from the feed at 1930hours for an hour and a half to attend a social event.What time will the feed be completed? |  | **Answer** The full break will happen during the feed.18.00 + 08.00 + 01.30 = 27.30 -> 3.30 at night  | **Do not write in this column** |

**Question 16**

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| --- | --- | --- | --- |
| A unit of blood is to be transfused over 3 hours. The volume of blood is 240 mLThe drip rate of the infusion set is 15 drops per mLPlease calculate the number of drops per minute the transfusion requires to be set at. |  | **Answer**(240 x 15) / (3 x 60) = 3600 / 180 = 360 / 18 = 40 / 2 = 20 drops/minute | **Do not write in this column** |

**Question 17**

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| --- | --- | --- | --- |
| Please calculate the number of drops per minute that the following intravenous infusion would be set at.The drip rate of the infusion set is 20 drops per mL500 mL 0.9% Sodium Chloride over 4 hours? |  | **Answer**(500 x 20) / (4 x 60) = 10000/240 = 1000 / 24 = 250/6 = 125 / 3= 41,6 = 42 drops/minute | **Do not write in this column** |

**Question 18**

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| --- | --- | --- | --- |
| Please calculate the number of drops per minute that the following intravenous infusion would be set at.The drip rate of the infusion set is 20 drops per ml.1000 mL of 5% Dextrose over 6 hours                                                                       |  | **Answer**(1000 x 20) / (6 x 60) = 20000 / 360 = 2000/36=1000/18=500/9=55.6=56 drops/minute | **Do not write in this column** |

**Question 19**

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| --- | --- | --- | --- |
| Please calculate the mL per hour that the infusion pump should be set at.A patient is prescribed 1000mL of 0.9% Sodium Chloride over 8 hours            |  | **Answer** 1000/8=125mL/hour | **Do not write in this column** |

**Question 20**

|  |  |  |  |
| --- | --- | --- | --- |
| Please calculate the mL per hour that the infusion pump should be set at.2500 mL Parenteral Nutrition over 24 hours     |  | **Answer**2500/24=1250/12=625/6=104,17 mL/hour | **Do not write in this column** |

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_END OF EXAMINATION\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_