

Paper 1 July 2021 Time allowed 1 hour 45 min Answer all questions

Q1 a) When tested an aqueous solution of sodium hydroxide was found to cause irreversible damage of intact skin after an exposure time of 20 minutes and an observation of 3 hours. What class and packing group should be assigned to this material? Show how you arrive at your answer.

b) A diluted version of this solution did not cause irreversible damage to healthy skin but did corrode aluminium at a rate of 8 mm per year. What class and packing group applies to this solution?

c) Select a UN number and proper shipping name for the diluted solution?

Ref:

Q2 a) Tetrabromomethane is to be packed in fibreboard boxes each containing 4 x 1L bottles. Can these boxes be shipped as limited quantity packages? Justify your answer.

b) What labels and marks should be applied to the package?

Ref:

Q3 Can sodium hydrosulphide with 10% water of crystallization be packed together with Phenetidines, and if so, under what conditions?

Ref:

Q4 a) Lithium ion batteries with a Watt hour rating of 5.5 Wh are packed in blister packs containing 4 batteries per blister pack. The blister packs are then placed 10 to a box for distribution to retail outlets. What marks and labels are required to be displayed on the boxes. Provide all relevant details.

b) What other conditions apply to the packages?

Ref

Q5 A chemical distributor in Italy is shipping Chloroacetonitrile to a customer in Hungary. The goods are packaged in combination packages which are then placed on a pallet and covered with black shrink wrap. The UN number and a no 6.1 label is displayed on the outside of the shrink wrap.

a) Is this sufficient?

b) What languages are required for the marking?

Ref:

Q6 Can Cyclopropane be transported in cylinders and pressure drums?

Ref

Q7 a) State two of the subjects that must be covered in a specialization training for drivers of tank vehicles

b) What is the period of validity of a driver's certificate?

Ref

Q8 A doctor wishes to send a blood sample from a patient who they suspect has contracted Hepatitis B to a lab for confirmation. What UN number and packing instruction apply to this sample

Ref

Q9 a) When preparing to set out on his journey a driver of a dangerous goods vehicle is asked by a friend coming off night shift if he can have a lift home as he will be passing his home on his way. Is this permitted?

b) The driver was a smoker but has now switched to E-cigarettes. Can he vape while driving?

Ref